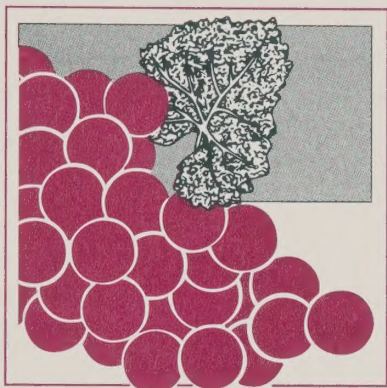




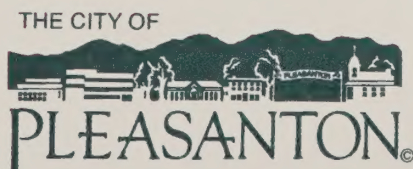
DRAFT
Environmental Impact Report
for the
Vineyard Avenue
Corridor Specific Plan

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1 INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

This environmental impact report (EIR) has been prepared to evaluate the environmental impacts associated with development of the Vineyard Avenue Corridor Specific Plan (Specific Plan), located along Vineyard Avenue in southeast Pleasanton. The proposed project would include development of 189 single-family residential units, a 12-acre elementary school, a 20-acre community park, and 67 acres of vineyards. Development of the project site would require a General Plan Amendment to modify the existing designation of “Specific Plan” Area to a combination of the following land use designations: Rural Density Residential, Low Density Residential, Medium Density Residential, Public and Institutional, Public Health and Safety, Parks and Recreation, and Agriculture and Grazing. A General Plan Amendment would also be required for a realignment of Vineyard Avenue. The realigned roadway would be moved toward the northern property boundary. In addition, the proposed project would require a rezone to accommodate a series of Planned Unit Development (PUD) zoning districts and an annexation of Lots 32 and 33.

The EIR has been prepared in compliance with the California Environmental Quality Act of 1970 (CEQA) (Public Resources Code §21000, *et seq.*) and the State CEQA Guidelines (California Code of Regulations §15000, *et seq.*), as amended. An EIR is a full disclosure, public information document in which the significant environmental impacts of a proposed project are evaluated; measures to mitigate significant impacts are identified, when feasible; and alternatives to the project that can reduce or avoid significant environmental effects are discussed. The project is described in Chapter 3, Project Description, and its impacts are evaluated in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. Four alternatives to the project are addressed in accordance with §15126(d) of the State CEQA Guidelines. These include the No Project Alternative, a 150-Unit Development Alternative, a 250-Unit Development Alternative, and a Vineyard Avenue Alignment Alternative. These alternatives are evaluated in detail in Chapter 5, Alternatives, of this document.

An EIR is an informational document used in the planning and decision-making process by the lead agency (i.e., the City of Pleasanton) and all responsible agencies. CEQA Guidelines define the “Lead Agency” as the public agency with principal responsibility for carrying out or approving a project. The term “Responsible Agency” includes all public agencies, other than the Lead Agency, that have discretionary approval power over aspects of the project. The purpose of an EIR is not to recommend either approval or denial of a project; its purpose is to disclose objective information so that informed decisions can be made. CEQA requires the decision-makers to balance the benefits of a proposed project against its unavoidable environmental effects in deciding whether to carry out a project.

After reviewing this EIR and the project proposal, the Pleasanton City Council will decide, through a majority vote in a public hearing, whether to approve, approve with modifications, or deny the project. The identification of environmental impacts as significant and unavoidable does not mean a project must be denied; the City of Pleasanton may still approve the project if it believes that economic, legal, social, technological or other benefits outweigh the significant unavoidable impacts. After

preparation of CEQA-mandated “findings” for each significant environmental effect, pursuant to PRC §21081(a), the City would be required to state in writing the specific reasons for approving the project, despite significant unavoidable impacts, based on information in the EIR and other information in the record. This reasoning is called, per PRC §21081(b) and §15093 of the State CEQA Guidelines, a “statement of overriding considerations.”

The City also intends for this EIR to serve as the CEQA-required environmental documentation for consideration of this project by other Responsible Agencies and Trustee Agencies, including, but not limited to, the Regional Water Quality Control Board, the California Department of Education, the California Department of Fish and Game, the California Department of Transportation, the U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers.

The preparation of this EIR has taken place in tandem with the preparation of the Specific Plan. The Specific Plan has taken advantage of concurrent CEQA review by incorporating provisions that avoid or minimize adverse impacts that might otherwise be associated with site development. In each resource category evaluated in Chapter 4, the Specific Plan design characteristics and development requirements that are intended to reduce development impacts are identified. These design characteristics and development requirements of the Specific Plan are intended to “pre-mitigate” impacts that would otherwise occur with site development, thereby reducing both adverse impacts and the mitigation requirements.

1.2 SCOPE OF THE EIR

In accordance with CEQA, a good faith effort has been made during the preparation of this draft EIR to contact affected agencies, organizations, and persons who may have an interest in the project. The City of Pleasanton submitted the Notice of Preparation (NOP) of this EIR to the California Office of Planning and Research on March 3, 1998. The NOP is a CEQA-required brief notice sent by the Lead Agency to notify Responsible Agencies, Trustee Agencies, and potentially affected federal agencies, that the Lead Agency plans to prepare an EIR and solicits guidance regarding EIR scope and content. The Notice of Preparation, which identified potential project environmental issues, was circulated to affected agencies, beginning a 30-day comment period. The NOP and the comments received are found in Appendix A.

On March 16, 1998, the City of Pleasanton held An EIR scoping meeting for the proposed project. The intent of the scoping meeting was to provide the public with an opportunity to identify issues that should be evaluated in the Draft EIR. A summary of the issues raised during this scoping meeting is included in Appendix A.

Based upon an understanding of the project, the comments received on the NOP, and the public scoping meeting, the City has determined that the proposed project has the potential to result in significant or potentially significant impacts in the following environmental issue areas, which are addressed in this EIR:

- land use
- geology and soils
- hydrology and water quality
- biological resources
- noise
- air quality
- transportation and circulation
- public services and utilities
- public health and safety
- aesthetics
- cultural resources
- cumulative and growth-inducing impacts

1.3 TERMINOLOGY USED IN THE EIR

The EIR includes the following terminology to denote the significance of environmental impacts of the proposed project:

- ▶ ***Less-than-Significant Impact:*** A less-than-significant impact is one that would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.
- ▶ ***Significant Impact:*** CEQA §21068 defines a significant impact as that which has "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project." Levels of significance can vary by project, based on the change in the existing physical condition and the "... substantial body of opinion that considers or will consider the effect to be adverse" Appendix G of the State CEQA Guidelines provides a list of consequences that would normally be regarded as having a significant effect on the environment. This EIR uses the CEQA definition of significant impacts. Mitigation measures or alternatives to the proposed project must be provided in an attempt to reduce the magnitude of significant impacts to less-than-significant levels.
- ▶ ***Potentially Significant Impact:*** A potentially significant impact is one that, if it were to occur, would be considered a significant impact as described above; however, the occurrence of the impact cannot be immediately determined. For example, while the EIR may provide evidence that buried archaeological resources could be found in a particular location, the actual discovery cannot be determined until the time of project construction. For CEQA purposes, a potentially significant impact is treated (e.g., mitigated) as if it were a significant impact.

- ▶ ***Significant and Unavoidable Impact:*** A significant and unavoidable impact is one that would result in a substantial adverse effect on the environment which could not be mitigated to a less-than-significant level. A project could still proceed with significant unavoidable impacts, but the City would then be required to prepare a Statement of Overriding Considerations, pursuant to State CEQA Guidelines §15093, which would explain why the City would proceed with the project in spite of the potential for significant impacts.
- ▶ ***Threshold of Significance:*** A criterion established by the lead agency to define at what level an impact would be considered significant; i.e., if an impact exceeds a threshold, it would be considered significant. A criterion is defined by a lead agency based on examples found in CEQA or the State CEQA Guidelines, scientific and factual data relative to the lead agency jurisdiction, views of the public in affected areas, the policy/regulatory environment of affected jurisdictions, and other factors.

The EIR also identifies Specific Plan measures that are intended to mitigate impacts associated with site development. State CEQA Guidelines §15370 defines mitigation as:

- a. avoiding the impact altogether by not taking a certain action or parts of an action;
- b. minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- c. rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- d. reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- e. compensating for the impact by replacing or providing substitute resources or environments.

1.4 EIR ORGANIZATION

This EIR is organized into chapters, as identified and briefly described below. Chapters are further divided into sections (i.e., Section 4.2, Earth Resources).

Chapter 1, Introduction: Regulatory background, context for, and organization of, the EIR.

Chapter 2, Executive Summary: Table-style summary of potential environmental impacts, mitigation measures, and level of significance after mitigation (as fully described in Chapter 4) with introductory discussion.

Chapter 3, Project Description: History of the project site, full description of the proposed project, and project objectives.

Chapter 4, Environmental Setting, Environmental Impacts, and Mitigation Measures: Evaluation of the change in environmental conditions that would occur with implementation of the proposed project, thresholds applied to and subsequent determination of levels of significance of impacts, mitigation measures and their effectiveness, and levels of significance after mitigation.

Chapter 5, Alternatives to the Proposed Project: Comparison of environmental impacts of alternatives that could reduce potentially significant impacts of the proposed project while meeting the lead agency's basic objectives for the project.

Chapter 6, Cumulative and Growth-Inducing Impacts: CEQA-mandated sections including cumulative impacts and growth-inducing impacts of the proposed project.

Chapter 7, Report Preparation: Identification of the lead agency, responsible agencies, consultants, and others involved with preparation of the EIR.

Chapter 8, References and Personal Communications: List of references and personal communications used in preparation of the EIR.

Appendices: Various technical reports, letters, official publications, etc., summarized or otherwise used for preparation of the EIR.

1.5 PUBLIC REVIEW PROCESS

A 45-day review period has been established for the draft EIR in accordance with the requirements of State CEQA Guidelines §15106. Comments regarding the adequacy of the EIR may be made on the draft EIR in writing before the end of the comment period or may be presented orally at the public hearing. Following the close of the public comment period, responses to substantive written and oral comments on the draft EIR will be prepared and published as a separate document. The draft EIR, together with the responses to comments document, will constitute the final EIR. The final EIR will be considered by the City of Pleasanton prior to any action taken on the proposed project.

Written comments on the draft EIR must be sent to:

**Wayne Rasmussen
City of Pleasanton
Department of Planning & Community Development
200 Old Bernal Avenue
P.O. Box 520
Pleasanton, CA 94566-0802**

2 EXECUTIVE SUMMARY

2.1 INTRODUCTION

This Executive Summary section is provided in accordance with State CEQA Guidelines §15123. As stated in the State CEQA Guidelines §15123(a), “[a]n EIR shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical.” State CEQA Guidelines §15123(b) states, “[t]he summary shall identify: (1) Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; (2) Areas of controversy known to the Lead Agency including issues raised by agencies and the public; and (3) Issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects.” Accordingly, this summary includes a brief synopsis of the proposed project and project alternatives, environmental impacts and mitigation, areas of known controversy, and issues to be resolved in the environmental impact report (EIR). Table 2-1 (at the end of this section) presents the summary of potential environmental impacts, their level of significance without mitigation measures, mitigation measures, and levels of significance with mitigation measures.

2.2 SUMMARY OF PROJECT DESCRIPTION

The Vineyard Avenue Corridor Specific Plan is intended to serve as the primary land use and regulatory guide for development of the Plan Area. The objective of the Specific Plan is to establish a high-quality living environment that features a rural vineyard character and provides for a variety of residential, commercial, vineyard, open space, recreational, elementary school, and other uses. The Specific Plan includes development of 189 single-family residential units, a 12-acre elementary school, a 20-acre community park, and 67 acres of vineyards. In addition, Lot 28 within the Specific Plan would have the option to develop a 100-room inn/spa/restaurant/conference facility and vineyard estate instead of housing, and small bed-and-breakfast inns would be conditionally allowed on certain lots. Changes in the roadway network would include the realignment of Vineyard Avenue which would be moved toward the northern property boundary adjacent to Arroyo del Valle. Public services, including water and wastewater facilities, would be extended to the site to accommodate the proposed development.

The land use plan is intended to facilitate the transition between the urbanized edge of Pleasanton to the west and the more rural, larger lot Ruby Hill development to the east. The design concept requires environmentally sensitive design of homes in the hillside areas south of Vineyard Avenue, and the integration of vineyards and other land uses north of Vineyard Avenue, organized to create a functional and attractive visual entry to the Livermore Valley wine country.

2.3 DISCRETIONARY ACTIONS AND PROJECT APPROVALS

The City of Pleasanton has the primary approval authority over the proposed project. The EIR is to be certified by the City Council prior to the City taking action on the proposed project. Following certification of the EIR, the project will be considered for approval, conditional approval, or denial by the City Council.

This EIR is also intended to be used by responsible agencies that may have some other authority over the project. Responsible agencies for this project include the U.S. Army Corps of Engineers, the California Department of Fish and Game, the California Department of Transportation, the U.S. Fish and Wildlife Service, the California Department of Education, and the California Regional Water Quality Control Board. Approval of the proposed project would require, at a minimum, the following discretionary actions from the lead and responsible agencies:

- ▶ Approval of a rezone by the City of Pleasanton to accommodate a series of Planned Unit Development (PUD) zoning districts.
- ▶ Approval by the City of Pleasanton of an annexation of Lots 32 and 33 into the City.
- ▶ Approval of subsequent subdivision maps and development plans by the City of Pleasanton.
- ▶ Issuance of the Grading and Building Permits by the City of Pleasanton.
- ▶ Issuance of National Pollutant Discharge Elimination System (NPDES) general construction activity permits and Section 401 certification for wetland fill by the Regional Water Quality Control Board.
- ▶ Issuance of Section 404 (Clean Water Act) permits by the U.S. Army Corps of Engineers for the filling of jurisdictional wetlands.
- ▶ Issuance of 1601/1603 Streambed Alteration Agreements by the California Department of Fish and Game for disturbance within streambeds.
- ▶ Approval of the elementary school site plan by the California Department of Education.

2.4 AREAS OF CONTROVERSY, ISSUES RAISED, AND AREAS RESOLVED IN THE EIR

The City of Pleasanton submitted the Notice of Preparation (NOP) of this EIR to the California Office of Planning and Research on March 3, 1998. The purpose of the NOP was to solicit comments from public agencies on issues germane to that agency that should be considered in the Draft EIR. The public review period for the NOP ended 30 days after public distribution of the NOP. All of the issues raised in the NOP comment letters (Appendix A) have been addressed in the Draft EIR. No apparent significant areas of controversy have been identified in these letters.

2.5 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Chapter 4 of this EIR describes in detail the environmental impacts that would result from implementation of the proposed project. The City of Pleasanton, in its review of the proposed project

and determination for action, will consider the entire environmental assessment contained in this EIR. Upon completion of the environmental review process, the City will have the option to certify that the final EIR: (1) has been completed in compliance with CEQA; (2) it was presented to the decision-making body of the Lead Agency (i.e., the City Council) and that the decision-making body reviewed and considered the information contained in the final EIR prior to approving the project; and (3) that it reflects the lead agency's independent judgement and analysis (State CEQA Guidelines §15090). If the EIR is certified, the City will determine in a separate action whether the proposed project will be denied, approved, or conditionally approved.

The City, if it chooses, can approve or conditionally approve the proposed project even if significant impacts are identified. When significant effects are identified and the lead agency wishes to approve or conditionally approve the project, CEQA §21081 requires that one of three specific findings be made for each significant effect. The City, as the lead agency, must also adopt a "statement of overriding considerations" if the proposed project is approved with unavoidable significant effects to the environment. The statement of overriding considerations is a statement by the decision-makers acknowledging that significant unavoidable environmental impacts are acceptable when balanced against certain economic, legal, social, technological, or other benefits of the project.

2.6 PROJECT ALTERNATIVES

Section 15126(d) of the State CEQA Guidelines, as amended, mandates that all EIRs include a comparative evaluation of the proposed project with alternatives to the project that are capable of attaining most of the project's basic objectives but would avoid or substantially lessen any of the significant effects of the project. CEQA requires an evaluation of a "reasonable range" of alternatives, including the "no project" alternative. Section 5 (Alternatives to the Proposed Project) of this EIR provides an analysis of the comparative impacts anticipated from four alternatives to the proposed project and associated mitigation measures: 1) the no-project alternative, consisting of no development on the project site; 2) a reduced-density alternative, consisting of 150 residential units; 3) an increased-density alternative, consisting of 250 residential units; and 4) a Vineyard Avenue alignment alternative that would maintain Vineyard Avenue in its current location. Other than the no-project alternative, no other alternative was identified as environmentally superior to the proposed project.

2.7 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

Section 4 of this EIR provides a description of the potential environmental effects of the proposed project, as well as proposed measures to mitigate project effects to the extent feasible. Section 5 provides a discussion of cumulative impacts. After implementation of the proposed mitigation measures, the majority of the adverse effects associated with the proposed project would be reduced to a less-than-significant level. The following impacts would, however, remain, after implementation of the identified mitigation measures, as significant and unavoidable adverse impacts of the proposed project:

Land Use: Land use conflicts between approved aggregate mining operations on Lot 21 that could occur in the future and proposed residential uses would include noise levels in excess of the City's exterior noise level standards, nuisance dust generation and potential ground vibration. Although

measures have been included in the Specific Plan to reduce these impacts, the land use conflicts would not be reduced to less-than-significant levels.

Earth Resources: Groundshaking during expected earthquakes on regional faults could cause structural and non-structural damage at the project site. Although measures have been included in the Specific Plan to reduce these impacts, the adverse effects of expected strong seismic shaking cannot be practically reduced to less-than-significant levels.

Noise: Noise levels generated by future gravel harvesting operations in the project vicinity and on Lot 21 would be expected to exceed the City's exterior noise standards. Although measures have been included in the Specific Plan to reduce these impacts, because of the proximity to proposed residential uses and the high noise levels associated with gravel harvesting operations, these impacts would not be reduced to less-than-significant levels.

Regional Air Quality: Nitrogen oxide (NO₂) emissions generated from the operation of motor vehicles and the use of natural gas and electricity associated with development of the Specific Plan Area with the resort/conference facility, would exceed the significance threshold established by the Bay Area Air Quality Management District. Although measures have been included in the Specific Plan to reduce these impacts, the NO₂ emissions would not be reduced to less-than-significant levels.

Gravel Harvesting Emission: Site grading, excavation and construction activities associated with already permitted aggregate mining on the project site could result in potentially significant air quality impacts for the duration of the mining activity. Because this activity is already a permitted use, mitigation would not be feasible to impose as part of this project. Therefore, it would remain a potentially significant and unavoidable impact.

Cumulative Water Supply: The project would contribute to a cumulative demand for water that, in combination with other City and area plans, would require augmentation of presently identified water sources for the area. General Plan policies call for contingency planning that includes water conservation, growth management, and planning for supplemental water supply sources. If additional water supplies cannot be secured, or water conservation measures do not result in sufficient water savings, water demands of the proposed project would contribute to demand for water that exceeds secured supplies. This would be considered a significant and unavoidable cumulative impact.

Cumulative Wastewater: The additional wastewater flows attributed to development under the Specific Plan could contribute to a possible future shortfall of treatment capacity at the Dublin San Ramon Services District (DSRSD) wastewater treatment plant as well as to an impending shortfall of export capacity at the Livermore-Amador Valley Wastewater Management Authority (LAVWMA) facilities. General Plan policies call for securing further sewage capacity for future development. The impact of the proposed project, and the City's General Plan as a whole, is mitigated by steps the City of Pleasanton, in conjunction with the City of Livermore and DSRSD as members of LAVWMA, are taking to provide for expansion of export capacity and/or alternatives that would reduce future capacity requirements. Nevertheless, if additional treatment and export capacity are not achieved, or reductions in water use cannot reduce demand for capacity to an appropriate level, development of the Specific

Plan would contribute to excess demand for the available capacity in both systems. This would be considered a significant and unavoidable cumulative impact.

Cumulative Traffic and Circulation: Trips generated by the proposed project, when combined with the cumulative development planned in the region, would contribute to unacceptable traffic operations on segments of Interstates 580 (I-580) and 680 (I-680). Improvements to the capacities, and the need to create a “Corridor Management Plan” for both I-580 and I-680 are included in the Tri-Valley Transportation Plan (TVTP). Because the TVTP does not provide adequate capacity to fully satisfy all future transportation demand at its established service standards, cumulative impacts on the regional transportation system would be anticipated. The development of the proposed project would contribute to that cumulative impact.

Transportation impact fees paid by development in the Plan Area would contribute to financing improvements included in the TVTP. The Tri-Valley Transportation Council (TVTC) fees provide funding for a west Bart station and express lanes. Other funding for TVTP-identified improvements may also be available by way of the proposed Measure “B” extension and the Regional Gas Tax. For example, additional funding included in the STIP for I-680 south would result in the addition of high occupancy vehicle (HOV) lanes and facilities for corridor ramp metering. Construction of I-680 improvements is scheduled to begin in the winter of 1998 or spring of 1999, earlier than they could be accomplished if wholly reliant on TVTP funds (for which the spending priority is the I-580 flyover). The TVTC fees have been committed by the seven participating jurisdictions. Fees imposed under the joint powers agreement are not expected to fully provide for meeting the TVTP capital needs. Therefore, a significant and unavoidable cumulative traffic operations impact on segments of I-580 and I-680 would be anticipated.

Table 2-1
EXECUTIVE SUMMARY

Impact	Specific Plan Measure	Level of Significance with Mitigation
LAND USE (Section 4.1)		
4.1-1: Site Rezone. The proposed Specific Plan project requires a site rezone. The proposed zoning designations would be consistent with the land use designations proposed in the Specific Plan. Therefore, no significant impacts would be anticipated.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.1-2: Conversion of Agricultural Land. Development of the Plan Area would result in the conversion of agricultural land to suburban uses. This would reduce the total area of agricultural lands within the City. The conversion of vacant portions of the project site to vineyard or other agricultural operations would minimize this impact. Also, no farmland of Statewide or Local Importance is located within the Plan Area. Therefore, the conversion of agricultural lands to suburban uses would be considered a less-than-significant impact.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.1-3: Land Use Conversion - Open Space to Suburban Uses. Development of the Specific Plan would convert limited undeveloped open space to suburban uses. However, the preservation of open space is a key feature of the Specific Plan. Hillsides on the southern portion of the Plan Area would be retained as primarily open space with limited clustered residential development. Additionally, open space buffers are proposed to separate uses on the flatter portions of the Plan Area near the Arroyo del Valle. The conversion of open space to suburban uses would, therefore, not result in significant impacts.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

Table 2-1
EXECUTIVE SUMMARY

Impact	Specific Plan Measure	Level of Significance with Mitigation
4.1-4: Land Use Compatibility - Residential with Agricultural Land Uses. The proposed Specific Plan designates areas in the northern portion of the Plan Area for vineyards and other potential agricultural operations. An existing vineyard use on Lot 26 would also continue after implementation of the proposed Plan. Land use compatibility conflicts could occur between the proposed residential uses and existing and proposed agricultural operations. Residents could potentially be exposed to dust, pesticides, fertilizers, odors and noise associated with agricultural operations and in turn could oppose and seek the termination or a reduction in the agricultural uses within the Plan Area. This is considered a potentially significant land use compatibility impact.	The Specific Plan requires that urban uses be separated from existing and proposed agricultural operations through buffers such as streets or passive open space. Purchasers and renters of property are required to sign a statement to be included in their deed of sale or rental/lease agreement to protect agricultural uses from nuisance lawsuits. The statement shall read as follows: “You are hereby advised that this property is located near land zoned and/or used for agricultural purposes. Agricultural use is defined as including but not limited to day and night time activity relating to livestock grazing, the keeping of livestock, the growing and processing of agricultural crops, and any commercial agricultural practices performed as incidental to or in conjunction with such operations. Some of the impacts associated with agricultural use include but are not limited to noise, odors, dust, chemicals, refuse, waste, unsightliness, use of agricultural equipment, and traffic. Permitted agricultural pursuits conducted in accordance with good practice and maintenance are not deemed by the City of Pleasanton to be a nuisance.” Site-specific vineyard and open space management plans shall be prepared and submitted by each developer of lots which contain vineyard land as a part of the PUD development plan application. Plans shall address agricultural operations and wildlife and vegetation preservation needs. Vineyard planting (at least root-stock) and permanent irrigation facilities shall be completed prior to the issuance of building permits for the last 50% of dwellings to be	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
4.1-5: Land Use Compatibility - Parks and Residential Uses. The Specific Plan proposes development of a 20-acre community park (no sports field lighting is proposed). The park would serve residents of the Plan Area as well as the surrounding community. Existing residential uses are located generally to the south of the proposed park site. New residential uses are also proposed to the north, east and west of the park site. Noise generated by park users could create nuisances for adjacent residential areas. Also, easier access to adjacent residential areas could increase the potential for vandalism. Because residential uses are considered sensitive receptors for noise, and there is an increased potential for vandalism, the location of parks and residential land uses adjacent to each other may result in land use conflicts. This impact is considered potentially significant.	constructed on the original lot on which the vineyards are located. Additional measures are included in Chapter 4 of this report to mitigate land use compatibility impacts between agricultural operations and residential uses, including noise, dust generation, and fertilizer/pesticide use. Uses in the southern most portion of the proposed park shall generally be restricted to passive activities such as pedestrian/equestrian trails and open space. Setbacks and landscaped buffers of at least 30-feet shall be incorporated into the park site plan to screen existing and proposed adjacent residential areas from park noise and activities. Outdoor security lighting shall be shielded to direct light downward to minimize its visibility from surrounding properties.	LESS THAN SIGNIFICANT
4.1-6: Land Use Compatibility - Schools and Residential Uses. The Specific Plan proposes the development of a 12-acre elementary school adjacent to proposed residential uses. Noise generated by school uses, increased traffic at the beginning and end of the school day and vehicles parking in the adjacent residential areas either during the day or during special events at the school could create nuisances for adjacent residential	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
areas. However, the Pleasanton Unified School District would need to conduct a detailed school parking needs study prior to approval of a school development plan. The school development plan should provide adequate on-site parking to accommodate all school event parking needs. No significant land use compatibility impacts would be anticipated.		
4.1-7: General Plan Consistency - Aggregate Mining and Residential Uses. The Plan Area is located adjacent to the Arroyo del Valle, an area which is subject to extensive aggregate mining and processing. In addition, Lot 21 within the Plan Area is owned by RMC Lonestar. Alameda County issued a mining and reclamation permit to RMC Lonestar in 1981 that allows aggregate mining on approximately 2 acres of the northeastern portion of Lot 21 as part of the Livermore Amador Valley Quarry Reclamation Specific Plan. Conflicts could occur between the proposed residential uses and existing aggregate operations. Further, proposed residential uses could be affected by future mining and reclamation operations occurring on Lot 21. This impact would be considered significant and unavoidable.	Implement the Specific Plan measures identified in Section 4.5, Noise, and Section 4.6, Air Quality.	SIGNIFICANT AND UNAVOIDABLE
4.1-8: General Plan Consistency - Areas of Special Interest. Development of the Plan Area would be required to comply with the Areas of Special Interest requirements identified in the General Plan. Creation of a specific plan for the project site is in keeping with these requirements. Additional standards have been incorporated into the Specific Plan to address the issues relative to the Vineyard Avenue Corridor. Compliance would be required for all development in the Plan Area. No significant impacts would be anticipated.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

Table 2-1
EXECUTIVE SUMMARY

Impact	Specific Plan Measure	Level of Significance with Mitigation
EARTH RESOURCES (Section 4.2)		
4.2-1: Site Seismicity. Ground shaking during expected earthquakes on regional faults could cause structural and nonstructural damage at the project site. This would be considered a significant and unavoidable impact.	All structures and constructed slopes shall be designed in accordance with the most recent Uniform Building Code as modified by the California Code of Regulations. A soils and geotechnical report shall be prepared for each individual development (unless otherwise approved by the City Engineer) within the Specific Plan Area. Analysis presented in the geotechnical report shall conform with the California Division of Mines and Geology recommendations presented in the "Guidelines for Evaluating Seismic Hazards in California." Projects located within the alluvial deposit areas of the project site shall specifically address and be designed to withstand the potential for liquefaction. Projects within the upland areas or adjacent to steep slopes of upland areas shall specifically address the potential for seismically-induced landsliding. The report shall be submitted to the City for review by a qualified consulting geotechnical engineer reporting to the City at the applicant's cost. The project shall incorporate all recommendations of the City's consulting engineer into the project design.	SIGNIFICANT AND UNAVOIDABLE
4.2-2: Slope Instability. Construction of buildings or site improvements within or adjacent to landslides or slopes prone to landsliding could result in damage during new or continued slope movement. This impact would be considered potentially significant.	For areas with slopes steeper than 20% or within or adjacent to existing landslides, a slope stability analysis report (addressing static and pseudo-static conditions) shall be prepared by a licensed Civil Engineer and include the appropriate recommendations from the approved geotechnical report for any proposed residential development or roadway construction. The report shall provide recommendations for control of surface drainage, adequate groundwater drainage, and slide mass removal or stabilization, if necessary. The analysis shall be supported by investigation of site-specific conditions that shall include, but not be limited to:	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
4.2-3: Unstable Deep Fills. The proposed construction of deep fills at the project site could result in the development of adverse soil conditions that could cause deformation of the fills. This deformation could	▶ estimated recency of slope failures and potential for continued movement; ▶ depth of landslides or colluvial deposits and characterization of slide plane(s); ▶ shear strength data for subsurface materials at the project site; ▶ location of springs; ▶ groundwater level data that characterizes seasonal fluctuations; and ▶ justification of seismic coefficient used in pseudo-static analysis.	
	Proposed cut and fill slope designs shall have factors of safety not lower than 1.5 under static conditions and 1.0 under seismic shaking conditions. Prior to the final design of the relocated Vineyard Avenue, the stability of the slopes of the south bank of Arroyo del Valle generally within 200 feet of the proposed location of the roadway shall be evaluated by a qualified geotechnical engineer to determine if slope failures could affect the short- and long-term integrity of the constructed roadway or if construction or operation of the roadway could affect the stability of the banks. A geotechnical report shall be prepared for the City that specifies appropriate slope design and construction. Recommendations within the report shall be implemented in the roadway specifications.	
	All grading plans, cut and fill slopes, compaction procedures, and retaining structures shall be designed by a licensed geotechnical or civil engineer. All grading and slope preparation activities shall be conducted under the	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
affect the performance of foundations and other site improvements, including roadways and utility lines. This impact would be considered potentially significant.	supervision of a licensed geotechnical engineer or certified engineering geologist. To the extent possible, grading plans shall minimize earthmoving and site grading. Development design shall avoid placing structures and utilities on or near the tops of slopes or in the shallow subsurface of slopes. In graded construction areas, replacement vegetation shall be planted as quickly as possible. Graded areas that remain inactive for 10 days or more during the rainy season (October 1 to April 1) without permanent replanting should be hydroseeded or stabilized to inhibit dust generation. The final geotechnical report for the grading plan for proposed projects shall be prepared by a professional engineer and approved by the City Engineer. The report shall address the potential for delayed (differential settlement)consolidation within deep fills and associated land surface subsidence. The report shall provide specific recommendations for: ▶ Fill compaction specifications that consider the likelihood of eventual saturation and wetting and drying cycles for the fill materials; ▶ Removal of colluvial material or weathered rock that may be subject to consolidation under the load of proposed fills; ▶ Design that minimizes the variability of fill thickness within fills that underlie structures or other improvements at the project site; and ▶ Design and operation of adequate subsurface drainage systems for fills (particularly beneath heavily irrigated areas or other water sources such as swimming pools or detention basins). Drainage systems for the fills shall be designed to minimize maintenance and ensure long-term	

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
4.2-4: Expansive Soil. The potential for expansive soils on the site to shrink and swell dependent upon weather conditions could cause damage to structures. The soils throughout the project site exhibit the adverse condition of a moderate to high shrink-swell potential. This condition can cause deformation and damage to structures built on these soils. This impact would be considered potentially significant.	performance. Flow from the drainage system shall be controlled so as not to cause or contribute to erosion of existing drainage channels. On expansive soils with moderately high shrink-swell potential (Perkins loam and Pleasanton and Positas gravelly loam), building foundations and improvements shall consist of drilled pier and grade beams, deepened footings (extending below expansive soil), or post-tensioned slabs. Alternatively, expansive soil shall be removed and replaced with compacted non-expansive soil prior to foundation construction. The geotechnical report for each phase of the project shall require that subgrade soils for pavements consist of moisture-conditioned, lime-treated, or non-expansive soil, and that surface (including roof drainage) and subsurface water be directed away from foundation elements to minimize variations in soil moisture. Improvements proposed to be placed on slopes greater than 10%, or within 10 feet of the tops of such slopes, shall be approved for construction by a California licensed geotechnical engineer or California certified engineering geologist. The City shall approve grading plans and slope designs prior to implementation.	LESS THAN SIGNIFICANT
4.2-5: Compatibility with Mineral Resources. The development of areas of the project site designated as (aggregate) Resource Sector A-2 by the CDMG could result in a land use that is incompatible with the extraction of identified aggregate resources. The potential development area is relatively isolated in relation to regional resources and is not identified as an important sand and gravel harvesting area in the General	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
Plan. This impact would be considered a less-than-significant impact.		
HYDROLOGY and WATER QUALITY (Section 4.3)		
4.3-1: Increased Runoff. Development of the Specific Plan Area would result in the construction of additional impervious surfaces within the project site and may increase runoff. This would be considered a potentially significant impact.	Grading and drainage design plans shall be submitted to the City Engineer for each phase of development within the Plan Area and reviewed for compliance with all applicable City requirements. The drainage plans shall demonstrate that the proposed developments would minimize or eliminate increases in the volume or rate of runoff from the development sites. Following PUD development plan approval and prior to the installation of any new vineyards or other crops, each individual agricultural operator shall submit a grading plan to the City Engineer. The grading plan shall identify features for site drainage, runoff control, and appropriate best management practices for control of erosion and sedimentation.	LESS THAN SIGNIFICANT
4.3-2: Development Runoff Quality. Construction activities and post-construction site uses associated with the project could result in degradation of water quality in nearby surface water bodies by reducing the quality of storm water runoff. This would be considered a potentially significant impact.	Projects disturbing more than five acres of land during construction shall be required to file a Notice of Intent (NOI) to be covered under the State NPDES General Construction Permit for discharges of storm water associated with construction activity. The developer must propose control measures that are consistent with the permit. A Storm Water Pollution Prevention Plan (SWPPP) shall be developed and implemented for each site covered by the permit. A SWPPP should include Best Management Practices (BMPs) designed to reduce potential impacts to surface water quality through the construction and life of the project. A SWPPP shall be prepared such that, when properly	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
	implemented, it will reduce or eliminate impacts to surface water quality from all phases of the project. Required elements of the SWPPP include: Construction Storm Water Management Controls. These controls shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with storm water. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain. An important component of the storm water quality protection effort is knowledge of the site supervisors and workers. To educate onsite personnel and maintain awareness of the importance of storm water quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP. The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, and must include both dry and wet weather inspections. City of Pleasanton personnel will conduct regular inspections to ensure compliance with the SWPPP (this is already standard procedure). RWQCB personnel, who may make unannounced site inspections, are empowered to levy considerable fines if it is determined that the SWPPP has not been properly prepared and implemented. Erosion and Sediment Control. Best Management Practices (BMPs) designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization	

**Table 2-1
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Impact	Specific Plan Measure	Level of Significance with Mitigation
	controls, watering for dust control, perimeter silt fences, placement of hay bales, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control to keep sediment on the slopes. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. If hydroseeding is selected as the primary soil stabilization method, then slopes shall be seeded by September 1 and irrigated to ensure that adequate root development has occurred prior to October 1. Entry and egress from the construction site shall be carefully controlled to minimize offsite tracking of sediment. Vehicle and equipment wash down facilities shall be designed to be accessible and functional both during dry and wet conditions. Post-Construction Storm Water Management. This refers to measures taken to prevent storm water pollution associated with post-construction activities at the developed site. Because the project includes relatively low-density development, it may be practical for the design of the residential development areas to include no net gain in stormwater runoff from the site. Large single-family home lots generally provide many opportunities for stormwater management, including unit pavers on sand patios, concave lawn/infiltration basins, and dry-wells connected to roof downspouts. BMPs required in the SWPPP and grading plan requirements described in Impact 4.3-1 would effectively reduce or eliminate increased erosion while mitigating potential impacts	

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
4.3-3: Agricultural Chemical Use. The development and operation of vineyards and other possible crops and orchards within the project site could result in the discharge of agricultural chemicals to surface and subsurface waters potentially causing water quality degradation. This would be considered a potentially significant project impact.	related to sediment transport from residential development sites on runoff water quality. However, these requirements do not specifically address the potential erosion and sedimentation impacts associated with vineyard or other crop development and operations. The grading plan requirement discussed in Impact 4.3-1 would address the potential impacts of erosion and sedimentation associated with vineyards and other crops. Each individual vineyard or other crop owner of agricultural land shall be responsible for the preparation of an Integrated Pest Management (IPM) plan. The plan shall specify reduction of agricultural chemical (e.g., pesticides, fertilizers, etc.) use as an objective and present specific non-chemical measures (e.g., site planning, mechanical methods, or biologic controls) as alternatives to agricultural chemical use.	LESS THAN SIGNIFICANT
4.3-4: 100-year Flooding. Flooding along Arroyo del Valle could result in damage to non-flood sensitive uses in a small area at the northern site boundary. This would be considered a less-than-significant impact.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.3-5: Dam Failure Flooding. The northern portion of the project site is within the dam failure inundation area for Del Valle Reservoir. Flooding of the site during a dam failure event could result in damage to structures and other improvements and may cause injury or loss of life. The probability of a dam failure is remote and not foreseeable. Therefore, this impact would be considered less-than-significant.	Although the potential for a dam failure is unlikely, development of the proposed elementary school and any possible bed-and-breakfast inns, spas, restaurants and/or conference facilities within the inundation area will require the preparation of evacuation plans.	LESS THAN SIGNIFICANT
4.3-6: Water Quality Degradation from Salt Loading. Land uses proposed within the Specific Plan Area would increase the discharge of salts into surface	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

Table 2-1
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Impact	Specific Plan Measure	Level of Significance with Mitigation
and subsurface waters, potentially causing water quality degradation in the groundwater basin or the Alameda Creek watershed. This would be considered a less than significant impact		
BIOLOGICAL RESOURCES (Section 4.4)		
4.4-1: General Vegetation and Wildlife. Land use and roadway improvements in the Plan Area would eliminate or disturb habitat that supports many common plant and wildlife species. Some common wildlife species would also be adversely affected by increased traffic generated by road improvements. Habitats affected in the Plan Area would include annual grassland, blue oak woodland, and agricultural land. The plant and wildlife species found in these habitat types are regionally abundant and occur throughout a large geographic region. This impact would be considered less than significant.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.4-2: Heritage Trees. Implementation of the proposed project could result in the removal of up to 75 trees which qualify as Heritage Trees under the City of Pleasanton's Tree Ordinance. This would be considered a potentially significant impact.	Prior to issuance of a grading permit, all development applicants shall submit a tree survey to the City of Pleasanton Planning Department for approval. The tree survey shall note all trees to be removed or disturbed that are 6 inches in diameter or greater and shall specify the precise location of trunk and dripline, size, health and species of all existing trees with special notation of those classified as Heritage Trees.	LESS THAN SIGNIFICANT
	Heritage Trees not approved for removal that are within 200 feet of grading activity shall be protectively fenced at or beyond the dripline of each heritage tree (as determined by a certified arborist). This fence, which is meant to prevent activities that result in soil compaction beneath the canopy cover or over the root zone, shall be maintained until construction activities are completed. No grading, trenching,	

Table 2-1
EXECUTIVE SUMMARY

Impact	Specific Plan Measure	Level of Significance with Mitigation
4.4-3: Raptor Nest Disturbance. Implementation of the proposed project could result in disturbance of active raptor nests, which are protected under State Fish and Game Code (Section 3503.5). This would be considered a potentially significant impact.	or movement of construction equipment shall be allowed to occur within fenced areas. Protection of Heritage Trees on slopes and hillsides will additionally include installation of a silt fence at the upslope base of the protective fence to prevent any soil from drifting down over the root zone. Heritage Trees that are removed shall be replaced “inch for inch” (e.g., removal of a 16-inch-diameter tree may be replaced by 16 one-inch saplings or two 8-inch saplings, etc.), or by planting three times the number of individual trees lost, or a combination of both of these measures. When grading of an area of one acre or greater is to occur, or when one or more trees with a trunk diameter of 6 inches or greater are proposed to be removed during the raptor nesting season (February 1 to August 31), a focused survey for raptor nests shall be conducted by a qualified biologist during the nesting season. The survey shall be conducted no less than 14 days, and no more than 30 days, prior to the beginning of grading or tree removal. If nesting raptors are found during the focused survey, no grading or tree removal shall occur within 500 feet of an active nest until the young have fledged (as determined by a qualified biologist), or until the project applicant receives written authorization from CDFG to proceed. If the removal of nest trees is unavoidable, they shall be removed during the non-breeding season.	LESS THAN SIGNIFICANT
4.4-4: Wetlands and other Jurisdictional Waters of the United States. Implementation of the proposed project could result in fill of jurisdictional wetlands. Jurisdictional wetlands are considered a sensitive habitat and regulated by USACE. This impact would be considered potentially significant.	All grading plans shall include a minimum 100-foot setback from intermittent drainages and other seasonal wetlands that are not identified for development in the Specific Plan. The wetlands identified for development in the Specific Plan include the northern portion of the western-most drainage from approximately 300 feet south of the existing alignment of Vineyard Avenue to Arroyo del Valle to accommodate road	LESS THAN SIGNIFICANT

Table 2-1
EXECUTIVE SUMMARY

Impact	Specific Plan Measure	Level of Significance with Mitigation
	crossings and residential development on Lots 18 and 22, the northern portion of the central drainage from the existing alignment of Vineyard Avenue to Arroyo del Valle to accommodate the proposed school on Lots 18 and 19, a 300-foot section of the eastern drainage south of the existing alignment of Vineyard Avenue to accommodate residential development on Lot 27, a 60-foot section of the eastern drainage near the Plan Area's northern boundary to accommodate the realigned Vineyard Avenue crossing, and the majority of the eastern-most drainage that ends in a seep south of the existing alignment of Vineyard Avenue on Lot 28 to accommodate residential development. Measures to minimize erosion and runoff into seasonal drainages shall also be included in all grading plans. Appropriate runoff controls such as berms, storm gates, detention basins, overflow collection areas, filtration systems, and sediment traps shall be implemented to control siltation and the potential discharge of pollutants into preserved drainages. Prior to issuance of grading permits for Lots 18, 19, 21, 22, 24, 26, 27, 28, 32, and 33, a qualified biologist shall determine, through the formal Section 404 wetlands delineation process, the extent of jurisdictional wetlands on each lot. Authorization of a Section 404 permit shall be secured from USACE and a Section 1603 agreement shall be secured from CDFG, if applicable. As part of the permitting process, mitigation of impacts to jurisdictional wetlands shall be identified and implemented. The acreage shall be replaced or rehabilitated on a "no-net-loss" basis in accordance with USACE regulations. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods agreeable to USACE.	

Table 2-1
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Impact	Specific Plan Measure	Level of Significance with Mitigation
4.4-5: California Red-legged Frog. Implementation of the proposed project could result in loss of suitable California red-legged frog habitat. This impact would be considered potentially significant.	All grading plans will include a minimum 100-foot setback from seasonal ponds that are not identified for development in the Specific Plan. (Mitigation Measure 4.4-4 identifies all wetlands that would be disturbed with site development and Exhibit 4.4-1 identifies the seasonal ponds on the project site.) Construction activity occurring within 100 feet of an intermittent drainage, may occur only if the drainage is completely dry. Mitigation Measure 4.4-4 shall be implemented to reduce impacts on California red-legged frog habitat.	LESS THAN SIGNIFICANT
4.4-6: California Tiger Salamander. Implementation of the proposed project could result in the loss of suitable upland habitat for the California tiger salamander. The loss of potential tiger salamander habitat would be considered a potentially significant impact.	All grading plans will include a minimum 100-foot setback from suitable California tiger salamander breeding habitat (i.e., seasonal ponds) that is not identified for development in the Specific Plan. (Mitigation Measure 4.4-4 identifies all wetlands that would be disturbed with site development and Exhibit 4.4-1 identifies the seasonal ponds on the project site.) For the upland habitat of the California tiger salamander that would be removed with development of the proposed project, an equivalent amount of upland habitat shall be preserved within the Plan Area. Suitable tiger salamander habitat in the Plan Area includes all areas identified as blue oak woodland or annual grassland. The preserved habitat shall consist entirely of blue oak woodland or annual grassland habitat. All preserved habitat shall be managed and protected, in perpetuity, as natural habitat. Mitigation Measure 4.4-4 shall be implemented to reduce impacts on California tiger salamander habitat.	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
4.4-7: Other Special-status Species. In addition to California red-legged frog and California tiger salamander, a number of special-status species are known to occur in Alameda County, including the Alameda whipsnake and the San Joaquin kit fox. The proposed project is not expected to result in a substantial loss of habitat for any of these species. This impact would be considered less-than-significant.	No mitigation measures are required.	LESS THAN SIGNIFICANT
4.4-8: Arroyo del Valle. Implementation of the proposed project could adversely affect riparian habitat along the Arroyo del Valle. Riparian habitat is of special concern to CDFG, USFWS, and other resources agencies. This would be considered a potentially significant impact.	To protect the riparian habitat associated with the Arroyo del Valle, a 100-foot setback shall generally be established from the top of the south bank of the Arroyo del Valle. No development or construction activities other than trails shall be allowed within the setback area. Construction project fencing shall be placed at the outer edge of the setback area. The fencing shall be maintained until all construction activities are completed.	LESS THAN SIGNIFICANT
NOISE (Section 4.5)		
4.5-1: Noise from Construction Activities. Construction activities within the Specific Plan Area would generate intermittent and temporary increases in noise. Noise sensitive land uses may be subjected to intermittent noise levels in excess of the City's exterior noise standards. As a result, the generation of construction noise would be considered a potentially significant impact.	Construction of housing, roads, other infrastructure, and other site improvements shall be limited to the hours of 8:00 a.m. to 5:00 p.m., Monday through Saturday.	LESS THAN SIGNIFICANT
4.5-2: Stationary Source Noise Generated by Development. Noise generated by residential land uses would increase with site development. Noise level increases would also be anticipated with the school, park	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
and potential commercial land uses. Because these increased noise levels would not be expected to exceed the City's threshold of 60 dBA L_{dn}, significant impacts would not be anticipated.		
4.5-3: Noise Effects of Gravel Processing Operations. Noise-sensitive land uses would be exposed to noise levels from the existing gravel processing operations that would exceed the City's standards. This impact would be considered potentially significant.	All new two-story homes constructed less than 140 feet from the centerline of the realigned Vineyard Avenue, and all new homes where projected noise levels exceed an L_{dn} of 55 dBA (Lots 8, 9, 13, 15, 18, 19, 20, 21, 26, 27 and 28) shall be constructed with a fresh-air ventilation and/or air conditioning system that allows residents to maintain closed windows for noise and dust control. All windows facing the RMC Lonestar plant shall be dual-paned. Other Mitigation Measure may also be necessary depending upon the locations of homes (i.e., berms, landscaping, dual siting strategies). All new homes located on Lots where projected noise levels exceed an L_{dn} of 55 dBA (Lots 8, 9, 13, 15, 18, 19, 20, 21, 26, 27 and 28) shall be designed to locate sensitive outdoor recreation areas on the south side of the homes, wherever possible. The recorded deed of sale for all lots (Lots 8, 9, 13, 15, 18, 19, 20, 21, 26, 27 and 28) potentially subject to noise levels in excess of an L_{dn} of 55 dBA shall include a clause which states that the property is in an area subject to excessive noise, dust, and vibration levels from gravel harvesting and processing and that the City of Pleasanton is not liable for possible damages due to such impacts.	LESS THAN SIGNIFICANT
4.5-4: Noise Effects of Gravel Harvesting Operations. Noise-sensitive land uses would be exposed to noise from gravel harvesting operations in	Specific Plan measure 4.5-3 (above) shall be implemented to also minimize noise levels on the project site from offsite gravel harvesting operations.	SIGNIFICANT AND UNAVOIDABLE

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excess of the City's exterior noise standard. This impact would be considered significant and unavoidable.	A minimum six-foot high landscaped earth berm shall be constructed along the Vineyard Avenue frontage of Lots 4, 9, 10, 11, and 13 (and Lot 8, if desired by the owner of this developed parcel), and a decorative masonry soundwall and landscaping shall be constructed along the Vineyard Avenue frontage of Lot 1 and be designed to complement the existing soundwall and landscaping on the north side of Vineyard Avenue. All new two-story homes constructed less than 140 feet from the centerline of the re-aligned of Vineyard Avenue shall have a fresh air ventilation and/or air conditioning system to allow residents to maintain closed windows for noise control. Potential bed and breakfast inn facilities shall be designed to ensure that interior noise levels of the occupied rooms are less than 45 dBA L_{dn}. Dual-paned windows shall be required for all rooms with a view of Vineyard Avenue. Because windows must remain closed to obtain the required noise reduction, mechanical ventilation (e.g., air conditioning) shall be provided for all rooms. A Title 24 analysis shall be required during the design phase to determine the potential need for additional noise control measures.	LESS THAN SIGNIFICANT
AIR QUALITY (Section 4.6)		
4.6-1: Construction-Related Air Emissions. Construction activities associated with the proposed Specific Plan would temporarily produce emissions of NO_x, ROG, SO_2, CO, and PM_{10}. Emissions would vary substantially from day to day and could potentially produce substantial amounts of PM_{10}. The generation of	Site grading, excavation, and general construction activities could result in temporarily significant air quality impacts. To mitigate this impact, the Specific Plan air quality mitigation measures shall be implemented at all construction sites in accordance with BAAQMD Basic and Enhanced Control	LESS THAN SIGNIFICANT

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these construction emissions on the project site would be considered a short-term potentially significant air quality impact.	Measures. The specific controls included in the Specific Plan are as follows: ▶ During the construction period, all active unpaved construction areas shall be watered at least twice daily or treated with non-toxic soil stabilizers in order to avoid dust. Exposed stockpiles of dirt or sand shall be enclosed, covered, watered twice daily, or treated with non-toxic soil binders. ▶ If soil material is carried on public or private roads, such roads shall be swept daily with water sweepers to control dust, where applicable. ▶ In graded construction areas, permanent replacement vegetation shall be planted as quickly as possible, properly irrigated and maintained in health growing condition. Graded areas that remain inactive for ten days or more during the rainy season (i.e., October 1 to April 1) without permanent replanting should be hydro seeded or stabilized to inhibit dust. ▶ All trucks hauling excavated materials shall be covered with tarpaulins or other effective covers. ▶ All unpaved access roads, parking areas, and staging areas at construction sites shall be rocked, watered three times daily, or covered with non-toxic soil stabilizers. ▶ Traffic speed on unpaved roads shall be limited to 15 miles per hour. ▶ Reactive organic gas (ROG) emissions from adhesives, clean-up solvents, paint, and asphalt paving materials	

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Impact	Specific Plan Measure	Level of Significance with Mitigation
4.6-2: Local Air Quality Impacts of Project Traffic. Operation of the proposed project would increase CO concentrations at nearby roadway intersections due to increased project-generated vehicular traffic. However, the proposed project would not contribute to CO concentrations in excess of state or federal standards. Consequently, this impact would be considered less than significant.	used during project construction shall be reduced by using materials with a low ROG content, in compliance with Bay Area Air Quality Management District standards.	
	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.6-3: Regional Emissions. The proposed project would generate regional emissions primarily associated with the operation of motor vehicles and the use of natural gas and electricity. Additional emissions would be associated with the operation of gasoline-powered landscaping equipment, wood-burning fireplaces, and the application of architectural coatings. Regional emissions could exceed the BAAQMD significance threshold of 80 pounds per day for NO_x and contribute to the long-term degradation of regional air quality. This would be considered a potentially significant project impact for the proposed residential development and a significant and avoidable impact when the residential development is combined with commercial development.	The following mitigation measures are incorporated into the proposed project to reduce regional project-generated air emissions: ▶ The project site should be linked to the local transit system along the realigned Vineyard Avenue and school loop street system and provided with bus stop pull-outs and pedestrian shelters at the community park, school and applicable local street intersections along the realigned Vineyard Avenue. ▶ The installation of energy-efficient heating and cooling systems, and energy efficient lighting shall be required in all residential, commercial, and school construction. ▶ Only EPA-approved fireplaces and wood burning stoves shall be installed in residential units.	SIGNIFICANT AND UNAVOIDABLE
4.6-4: Operational Emissions From On-Site RMC Lonestar Gravel Harvesting Activities. The RMC Lonestar property within the eastern portion of the project site (Lot 21) has been previously permitted to	Site grading, excavation and construction activities associated with already permitted aggregate mining on the project site could result in significant air quality impacts for the duration of the mining activity. Because this activity is already a	SIGNIFICANT AND UNAVOIDABLE

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Impact	Specific Plan Measure	Level of Significance with Mitigation
include future gravel harvesting operations. If mining activities were to occur on this property, they could generate dust levels that would be a nuisance for new residents. This impact would be considered potentially significant and unavoidable.	permitted use, mitigation beyond that required by the 1981 Livermore-Amador Valley Quarry Reclamation Specific Plan would not be feasible to impose as part of this project.	
TRANSPORTATION and CIRCULATION (Section 4.7)		
4.7-1: Level of Service With the Proposed Project. Traffic generated by the development of the proposed project would not degrade levels of service at any of the study intersections. No significant impacts would be anticipated.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.7-2: Pedestrian and Bicycle Circulation. The proposed project would improve pedestrian and bicycle circulation in the local area. No significant impacts would be anticipated.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.7-3: Increased Vehicle Traffic on Vineyard Avenue. The proposed project would increase vehicle traffic on Vineyard Avenue. This increase would not exceed the roadway's available capacity. Also, it would not affect site distance at the four-way stop intersection of Vineyard Avenue and El Capitan Drive/Montevino Drive. This would be considered a less-than-significant impact.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.7-4: Cut-through Traffic. The increase in traffic associated with the proposed project could increase local neighborhood cut-through traffic. However, because the City has identified a Neighborhood Traffic Calming Program (NTCP) for the existing residential	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
neighborhood generally bounded by Vineyard Avenue on the north and Bernal Avenue on the west, significant increases in cut-through traffic would not be anticipated.		
4.7-5: Bernal Avenue Arroyo del Valle Bridge. Traffic generated from buildout of the General Plan may require a second bridge to be constructed on Bernal Avenue to cross the Arroyo del Valle. Development of the proposed project would contribute to this need. This would be considered a potentially significant impact.	The City shall contribute the pro-rata Plan Area cost-share funding to construct a second bridge for Bernal Avenue to cross Arroyo del Valle, if and when the City determines that such a bridge is necessary.	LESS THAN SIGNIFICANT
PUBLIC SERVICES (Section 4.8)		
Fire Protection		
4.8-1a: Increased Demand for Fire Protection Services. Development of the Plan Area with urban uses would increase the demand for fire protection services in the City of Pleasanton. The LPFD currently has a station located immediately east of the Plan Area that is adequately staffed and equipped to provide service to the Plan Area in less than 5 minutes. In addition, the City of Pleasanton has adopted a Growth Management Program to ensure that City facilities are constructed to keep pace with new development. Therefore, the increased demand for fire protection services associated with the proposed project would be considered a less-than-significant impact.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.8-1b: Exposure to Wildland Fire Risks. The General Plan identifies slopes and ridgelines in the Plan Area as “high” and “extreme” fire hazard areas. Construction of residential uses in the Plan Area could potentially expose people and property to increased	New homes surrounded by Open Space land shall be protected through the use of fire breaks, removal of any vegetation and other material presenting potential fire hazards, and use of fire-retardant vegetation.	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
wildland fire risks. The LPFD has concerns regarding access to steep portions of the Plan Area as well as vegetation management around residential structures. Therefore, potential wildland fire impacts associated with development of the Plan Area would be considered potentially significant.	Emergency vehicle access shall be provided to open space areas as identified by the LPFD.	
4.8-1c: Provision of Fire Flow. The Plan Area would be served by existing water conveyance infrastructure with additional distribution lines, pumps and water storage facilities. Adequate water supply is proposed to meet fire flow requirements for the Plan Area. However, 5 existing and 7 proposed residential structures above elevation 540 feet may not be able to meet required fire flow pressure requirements. The possible lack of adequate water pressure for these structures would be considered a potentially significant impact.	All residences located in areas with slopes greater than 15% shall be accessible from driveways designed to accommodate firefighting equipment. Driveways shall be a minimum of 16 feet wide and 20 feet clear. Driveways exceeding 150 feet shall be designed to allow a fire truck to turn around.	
4.8-1d: General Plan Consistency - Response Time. The proposed Specific Plan Area can be serviced by emergency vehicles within 5 minutes consistent with Policy 10 of the Public Safety Element. No impacts related to consistency with desired response times would occur.	All homes located above elevation 540 shall be provided with an elevated onsite water storage tank (minimum 1,000 gallon capacity) subject to approval by the LPFD, to ensure adequate pressure for domestic use, fire sprinklers, and other approved fire systems.	LESS THAN SIGNIFICANT
4.8-1e: General Plan Consistency - Design Plans. The Pleasanton Public Works Department and the LPFD review development plans prior to project approval and issuance of a building permit by the Building Inspection Department. All plans must be designed with adequate fire access, fire hydrants and water system designs in order	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
to be approved for construction. Projects which do not meet LPFD requirements will either be denied or have conditions to mitigate potential impacts prior to approval. Compliance with these requirements would ensure that the Specific Plan is consistent with General Plan Public Safety Element Fire Hazard Policy 12 and Programs 8.2, 13.2, 13.3 and 13.8. No impact would be anticipated.		
Police Protection		
4.8-2a: Increased Response Times. Development of the Plan Area would increase the demand for police protection services. The Pleasanton Police Department currently responds to calls for emergencies throughout its service area in less than an average of 4 minutes. The Department has indicated that the Plan Area could be served within this threshold. Therefore, a significant reduction in the Department's response time would not be anticipated.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.8-2b: Increased Demand for Police Services. Development of the Plan Area would increase the demand for police protection services. The Department recently hired additional officers specifically in response to growth in the southeastern portion of the City. Development within the Plan Area would benefit from the hiring of these officers. In addition, the increase in property tax revenues associated with Plan Area development could be used for additional staff resources, if required. The proposed project's impacts on police staffing would therefore, be considered less than significant.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
Parks and Recreation		
4.8-3a: Provision of Adequate Park Facilities. Development of the proposed Specific Plan would result in the demand for approximately 3 acres of parkland based on the Quimby Act requirement of 5 acres of developed or active parkland for every 1,000 population generated. Future developers within the Plan Area would be required to pay their fair share for parklands through the City's "In-Lieu Park Dedication Fee Ordinance". Also, twenty acres of the Plan Area are designated for a community park. This would satisfy the City's desired system-wide goal for community park acreage. No significant impacts on park and recreational facilities would be anticipated.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.8-3b: Consistency with General Plan - Trails. The Community Trails Master Plan contained in the Circulation Element of the City of Pleasanton General Plan identifies two proposed Class C trails and a staging area within the Plan Area. The Specific Plan accommodates the Class C trails through open space areas reserved as buffers for the intermittent drainages located on Lots 19, 22 and 26. A park is proposed on Lot 14, which would accommodate one of the trails and the staging area. Therefore, the proposed project would be consistent with the Community Trails Master Plan and the larger EBRPD trails system. No impacts related to General Plan consistency would occur.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
Water Supply		
4.8-4a: Adequacy of Water Supply. The proposed project would increase the demand for water in the City	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
of Pleasanton. Adequate supply is available to meet this demand. Therefore, no impacts on the City's water supply would be anticipated.		
4.8-4b: Adequacy of Water Distribution. Potable water is currently not provided by the City to the Specific Plan Area. However, the Specific Plan includes improvements to the water distribution system that would provide potable water to the proposed site uses. Therefore, project impacts on the water distribution system would be considered less than significant.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.8-4c: Adequacy of Water Storage. No City water storage facilities are currently located within the Plan Area. To provide adequate water pressure for domestic and fire flow capability, a new storage tank would be required. The proposed water system for the Plan Area includes a new tank on Lot 25. This tank would be of sufficient size to serve the Plan Area as well as enhance the reliability of the existing Bonde Zone system. Therefore, impacts to water storage/pressure would be considered less than significant.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.8-4d: Adequacy of Water Pressure. The Plan Area ranges in elevation from 383 feet above sea level on Lot 18 (adjacent to the Arroyo del Valle) to 700 feet on Lot 22. It is possible to serve development within this range by integrating the Plan Area into the Bonde Zone. However, 5 existing and 7 proposed homes above the upper Bone Zone limit would be required to install onsite storage and pumping facilities to provide adequate pressure for domestic and fire flows. With the implementation of these facilities, the impacts associated	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
with development of the proposed project on water pressure would be considered less than significant.		
4.8-4e: Availability of Water for Irrigation. The Specific Plan includes areas of vineyards and possible other agricultural uses that would require irrigation water. Well water or untreated surface water would be available to supply this water demand. No significant impacts would be anticipated.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.8-4f: General Plan Consistency. The proposed Specific Plan includes a water system concept plan that would provide adequate water supply, distribution and pressure for all development throughout the Plan Area consistent with General Plan Public Facilities Element Policy 4 and Program 4.4. Funding for all improvements would be paid for by new development consistent with Program 4.1. Therefore, no inconsistencies with applicable General Plan Policies would occur.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
Wastewater Service and Treatment		
4.8-5a: Adequacy of the Wastewater Collection System. Development of the proposed Specific Plan would increase flows to the City's sewage collection system. Improvements to an existing 8-inch sewer line, new pumping facilities, and the addition of a new 15-inch gravity line on the site are planned to provide wastewater collection for the Plan Area. A three-part construction program is proposed as part of the Specific Plan to install the necessary improvements. Therefore, the proposed project's effects on the local wastewater collection system would be considered less than significant.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
4.8-5b: Adequacy of Treatment Capacity. The proposed Specific Plan would generate approximately 0.046 mgd of wastewater. If the 100-room inn, spa, restaurant, and conference facility development occurs, approximately 0.051 mgd of wastewater would be generated. The remaining City capacity at the DSRSD treatment plant is approximately 1.335 mgd. The City, therefore, has adequate capacity to accommodate the proposed project. The proposed project's effects on available treatment capacity would be considered less than significant.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.8-5c: Adequacy of Export Capabilities. The proposed Specific Plan would generate new wastewater flow demands on the existing LAVWMA wastewater conveyance facilities. The capacity of the LAVWMA conveyance facilities is at or near capacity now and is anticipated to be exceeded in the near future. However, the City of Pleasanton has indicated that it could serve the proposed project using capacity leased to DSRSD from the City of Livermore and guaranteed per agreement with DSRSD. Because the LAVWMA system has the flexibility to accommodate the increased flows from the proposed project, this impact would be considered less than significant.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.8-5d: Provision of Sewer Service to Existing Residences. The 18 existing residences within the Plan Area which are planned to be retained or replaced would continue at least temporarily to be served by onsite septic systems. When these homes connect to the City's wastewater system in the future, they would generate approximately 220 gallons per day per home. This equates to a total increase of 3,960 gallons per day. This	No mitigation measures are necessary.	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
increase would be considered minimal and would not generate significant wastewater service impacts.		
4.8-5e: Consistency with the General Plan. The proposed Specific Plan includes a sewer concept plan and identifies funding considerations to finance the required improvements. Wastewater infrastructure, treatment and capacity would be secured or constructed prior to development of properties within the Plan Area consistent with applicable General Plan Public Facilities Element Policies 1 and 2. Therefore, no General Plan consistency impact would be anticipated.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
Schools		
4.8-6a: Increased Demand for School Services. The proposed Specific Plan would allow construction of 189 new homes in the Plan Area. These additional homes would generate an estimated 138 students. The PUSD has plans to add new school facilities based on forecasts of student enrollment. New construction would be required to pay developer fees that contribute to financing school facilities. These fees, in conjunction with federal and state allocations, would be sufficient to offset any impacts to schools. No significant school facility impacts would be anticipated.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
<u>PUBLIC HEALTH and SAFETY (Section 4.9)</u>		
4.9-1: Agricultural Chemical Use. The storage and use of agricultural chemicals in proposed vineyard and other possible agricultural operations could result in the exposure of workers or the public to increased health	All vineyard and other agricultural use operators shall notify adjacent landowners at least 24 hours prior to the application of any pesticide sprays or dust.	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
risks. This potential exposure is considered a potentially significant project impact.	Application of any pesticides by spraying or dusting shall be restricted to periods during which wind speeds are less than 5 miles per hour. Aerial spraying shall not be permitted. Prior to development of Lots 1, 2, 18, 19, 21, 22, 26, 28, 30, and 31, where a nursery or significant agricultural operations now exist or once existed, a Phase I Environmental Site Assessment shall be conducted by a qualified environmental professional in accordance with the requirements of the American Society for Testing and Materials (ASTM 1997). If the findings of the Assessment indicate the presence of, or potential for, hazardous materials use associated with the current or past agricultural uses of these sites, a Phase II Environmental Site Assessment shall be conducted by a qualified environmental professional to ascertain whether past or current land uses have contributed to soil and/or groundwater contamination at the site. Soil and groundwater samples collected during the Phase II Assessment shall be submitted to a California-certified laboratory for analysis. The analytical results of the Phase II Assessment shall be evaluated by a qualified environmental professional to determine whether chemicals could pose a hazard to future site users, construction workers, or the environment. If chemicals at the site could pose a hazard, a qualified professional shall conduct a risk assessment to quantify hazards based on soil and/or groundwater sampling results, and develop appropriate remediation measures, as necessary, to reduce potential risks for future site users to acceptable levels. Potential remediation measures may include, but not be limited to, soil removal, capping with an impermeable cover, soil vapor extraction, and groundwater remediation and/or monitoring. Regulatory agency oversight shall be obtained, as appropriate, from a local or State agency.	

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4.9-2: Landfill Hazards. Use of the old landfill as a park on Lot 14 could result in exposure of the public to contaminants that may result in increased health risks. This would be considered a potentially significant impact.	An inventory of the interior areas of all on-site agricultural structures shall be conducted by an environmental professional prior to their demolition. If hazardous materials are identified as being stored in these areas, such materials shall be transported to and disposed of/recycled at an appropriate off-site facility. Monitoring by an environmental professional during the removal of floors/foundations shall be conducted to determine if hazardous materials spills are present or suspected to have occurred in these areas. After demolition, a report by the environmental professional shall be submitted to the City delineating whether hazardous materials appeared to be present below the floors or foundations. If hazardous materials are present, a soil-sampling plan shall be prepared and implemented prior to disturbance of native soils. The soil samples shall be collected by a qualified environmental professional and submitted to a California-certified laboratory for analysis. The analytical results shall be evaluated by a qualified environmental professional for development of an appropriate health and safety plan for construction workers involved in site-demolition activities, waste-disposal options, and potential site investigation/remediation. A Health Risk Assessment (HRA) shall be prepared for the City by a qualified health risk professional for use of Lot 14 as a City park. The HRA shall evaluate the existing data on air, soil, and water quality from the site to determine if additional sampling and testing is required. The HRA shall be prepared in conformance with U.S. Environmental Protection Agency (EPA) and CalEPA guidelines. If the HRA indicates that park use of the site is appropriate, the Parks and Community Services Department shall prepare a worker Health and Safety Plan for development, operation, and maintenance of the	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
4.9-3: Release of Landfill Gas. The generation of methane gas within the old landfill site on Lot 14 presents the potential for exposure of the public using the proposed park and adjacent residents to the risk of fire, explosion or the release of methane gas in the event of the rupture of components of the collection system. This would be considered a potentially significant impact.	proposed park. If the HRA concludes the site has unacceptable health risks, then either 1) a remediation plan shall be prepared for approval by U.S. EPA and CalEPA, and the specified remediation measures shall be implemented; or 2) the Plan shall be modified to accommodate another use. The City shall attempt to obtain as-built drawings of all components of the methane gas collection system on Lot 14. If obtained, these records shall be maintained at the Building Inspection Department to ensure that any excavations made during park construction or operation do not rupture components of the system. The Department shall establish a protocol for all excavation activities (including drilling) that require the evaluation of the gas collection system drawings prior to the commencement of activities. All aboveground components of the methane gas collection system on Lot 14 shall be protected with locked fences or other secure enclosures to prevent public contact with these facilities for as long as they are needed. The design of the proposed park shall generally avoid any features that would require removal of the existing cover or excavation into the landfill materials. Should excavation into the landfill materials be required (e.g., for utilities or building foundations), the excavations shall be made under a worker health and safety plan prepared by a Certified Industrial Hygienist. All development projects on lands adjacent to the landfill on Lot 14 shall conduct a gas survey to determine if significant gas migration from the landfill is affecting the development site. The results of the survey shall be used to determine if standard construction of structures is appropriate or if non-	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
4.9-4: Exposure to Electromagnetic Fields. The existing 60-kV electrical powerline in the central portion of the project site could present a possible health risk related to electromagnetic fields (EMFs) to students at the proposed elementary school. This would be considered a potentially significant impact.	standard foundation/building ventilation systems should be required. The California Department of Education has adopted recommended setbacks for schools from powerline easements. The proposed school shall conform with the guidelines established by the California Department of Education for setback of schools from electrical power line easements.	LESS THAN SIGNIFICANT
4.9-5: Increased Wildfire Risk. The proposed project would increase the number of structures and population in the Specific Plan area. More intensive use of the project site could result in the increased potential for wildfires, potentially causing damage to structures, destruction of habitat, and personal injury. This would be considered a potentially significant impact.	An Open Space Fire Management Plan shall be prepared by developers of each lot which contains Open Space and shall be submitted to, and approved by, the Livermore-Pleasanton Fire Department prior to the issuance of occupancy permits for homes in the Specific Plan Area. The Plan shall propose specific measures to reduce potential fire hazards, including construction of buffers between homes and regular maintenance and disking of the property lines. If appropriate, the Plan may also specify the planting of “wet bands” between the residential development and open space areas.	LESS THAN SIGNIFICANT
4.9-6: Hazards Posed by Steep Slopes. Steep channel banks along Arroyo del Valle and adjacent unreclaimed aggregate mining pits filled with water may present attractive nuisances that could result in accidents and injury. This would be considered a potentially significant impact.	All brush and other flammable materials shall be cleared within at least 30 feet of new homes. Ornamental landscaping shall emphasize the use of fire-resistant species. Minimum six-foot high fencing shall be installed along the steep banks of Arroyo del Valle and all mining pits within the Plan Area to reduce the potential for recreational use of these areas. Signs shall be posted cautioning of steep, unstable slopes and potential drowning hazards. In addition to this provision, the stability of slopes along the arroyo shall be evaluated and modified, if necessary, to be made stable under short- and long-term conditions (see Impact 4.2-2).	LESS THAN SIGNIFICANT

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Impact	Specific Plan Measure	Level of Significance with Mitigation
4.9-7: Exposure to Disease-Bearing Organisms. The proposed project would attract additional people to residential areas near water sources (e.g., aggregate mining pits, creeks, detention basins, ditches, grassy swales) that can provide active breeding sites for disease-bearing organisms, potentially causing a disease transmission and an environmental nuisance problem. This would be considered a potentially significant impact.	The developers of land containing detention basins, springs, ponds, etc., shall contact the Alameda County Mosquito Abatement District (ACMAD) for assistance in controlling and managing potential disease-bearing vectors and their breeding areas, to reduce the potential for transmission of public health diseases associated with these organisms. The ACMAD shall also be consulted for assistance in the control and management of other organisms (e.g., Valley black gnat) and their breeding areas that pose an environmental nuisance. The owners of such developments shall be responsible for implementing all applicable recommendations of the District.	LESS THAN SIGNIFICANT
4.9-8: Worker Exposure to Hazardous Demolition Waste. Project site workers involved in demolition or renovation activities could be exposed to lead-based paint and asbestos-containing building materials, potentially causing adverse health effects. This would be considered a potentially significant impact.	Demolition of all structures shall be conducted in accordance with applicable requirements of the California Department of Industrial Relations (Cal OSHA) for lead, with appropriate follow-up measures taken if lead-based paint is found. Demolition of all structures shall be conducted in accordance with requirements of Cal OSHA and the Bay Area Air Quality Management District (BAAQMD) for asbestos, with appropriate follow-up measures if asbestos is found.	LESS THAN SIGNIFICANT
4.9-9: Releases of Hazardous Materials During Construction. Transport, storage, or handling of fuels, lubricants, and other hazardous materials for heavy machinery operation and maintenance during site development activities could release hazardous materials within the Specific Plan area. This would be considered a potentially significant impact.	A Spill and Pollution Prevention Plan shall be prepared by the developer of each project with soil disturbance (e.g., grading) of at least 5 acres. The Plan must (1) be prepared prior to the start of earthwork activities; (2) designate an on-site employee responsible for Plan implementation; and (3) include anticipated equipment needs and maintenance, emergency response procedures for hazardous materials releases, and procedures for contacting designated regulatory agencies in the event of a hazardous materials release. Notification of the Underground Services Alert (USA), as well as site tenants shall take place prior to groundbreaking to	LESS THAN SIGNIFICANT

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	obtain information on the location of possible underground utilities. Removal of above-ground or underground fuel tanks shall take place in accordance with the requirements of the Livermore-Pleasanton Fire Department, if these are to be removed as part of development under the Specific Plan.	
VISUAL (Section 4.10)		
4.10-1: Visual Changes in Subarea 1. Development of the proposed project would alter the visual character of the Subarea 1 by constructing up to 50 homes and a community park on land that is now substantially undeveloped. Most of the views of the site in this subarea would depict a project generally compatible with its surroundings. Development of Lot 12, however, could appear more dense and the visual impact would be potentially significant.	In order to minimize the potential visual impacts of development on Lot 12, the following additional standards shall apply: ▪ Not more than one lot shall be permitted to occupy the rear 200 feet of the existing Lot 12; ▪ Buildings on lots that are located within 300 feet of the existing Lot 12 rear lot line shall not exceed one story and 25 feet in height; ▪ An open-space band between the rear lot line of Lot 12 and elevation 520 shall be permanently maintained in its current condition. An open-space easement shall be granted over this area to the City at the time of final subdivision map recordation which restricts the use and improvements to livestock grazing, open fencing, underground infrastructure facilities, and storm-water drainage facilities. Solar collectors, dog runs, play structures and private roads shall specifically not be permitted within this area. A land management plan shall be prepared to establish private responsibility for permanently maintaining this open space land;	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
4.10-2: Visual Changes in Subarea 2. Development of the proposed project would alter the visual character of Subarea 2 by adding up to 72 homes, a school, and possibly a bed and breakfast inn on land that is mostly undeveloped. Most development would be visually unobtrusive or consistent with the rural character of the area. Therefore, the visual impact of project development of this area would be less than significant.	▶ Future buildings located to the north of the northerly boundary of the open space easement shall be constructed at least 40 feet north of the easement; and ▶ Grading on the ridge and north-facing slope of Lot 12 shall be carefully engineered to create natural and not geometric contours, with no slope exceeding a 3:1 grade. No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.10-3: Visual Changes in Subarea 3. Development of the proposed project would alter the visual character of Lots 22 through 31 by adding up to 67 homes on land that is mostly undeveloped. Development would be visually compatible with surrounding areas with clustered neighborhoods bounded by vineyards, and steep hillsides. Development is not intended to be visually prominent and in most cases, would minimally be visible from Vineyard Avenue. Therefore, the visual impact of project development of this area would be less than significant.	Although significant visual impacts would not be anticipated in Subarea 3, the following additional standards shall apply to Lots 22 and 23 in order to minimize the effects of development along Vineyard Avenue: ▶ Buildings on lots which abut Vineyard Avenue shall not exceed one story and 25 feet in height; ▶ A continuous open space band of at least 30 feet in width (to be precisely determined at PUD development plan approval) shall be maintained between the southern right-of-way line of the existing Vineyard Avenue and any future fencing on Lots 22 and 23. An open-space easement over this area shall be deeded to the City at the time of final subdivision map recordation which restricts the use of this area to landscape planting and irrigation, infrastructure facilities, and storm water drainage facilities. No fencing shall be permitted within this area.	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
4.10-4: Visual Changes in the Circulation System. Development of the proposed project would alter the visual character of the circulation system in the project area. Proposed landscape treatments and undergrounding of existing utilities would improve the visual character of this system, thus creating a beneficial project impact.	A coordinated landscape and irrigation plan shall be designed for this area to screen the views of homes from outlying areas to the north. A landscape management plan shall be prepared to establish private responsibility for permanently maintaining landscape materials within this area. A coordinated fencing plan shall be prepared for the area immediately south of the southern edge of the open space band. Future buildings to the south of the open space band shall be located at least 30 feet back from the southern edge of the band. Although significant visual impacts would not be anticipated with the proposed circulation system, the following additional standards shall apply in order to minimize the effects of development contiguous with Vineyard Avenue . ▶ A minimum six-foot-high landscaped earth berm shall be constructed along the Vineyard Avenue frontage of Lots 4, 9, 10, 11 and 13 (and Lot 8 if desired for the owner of this developed parcel); and a decorative masonry soundwall with landscaping shall be developed along the Vineyard Avenue frontage of Lot 1 and designed to complement the existing soundwall and landscaping on the north side of Vineyard Avenue.	LESS THAN SIGNIFICANT
4.10-5: Increased Light and Glare. Development of the proposed project would create new sources of, and opportunities for light and glare in the project area. However, light and glare would be minor and consistent with the appearance of surrounding areas. This would be a less-than-significant impact.	Although significant light and glare impacts would not be anticipated, the following additional standards shall apply to minimize increases in night lighting. ▶ No play field lighting shall be allowed at the proposed park facility on Lot 14 and no play field lighting shall be allowed at the proposed elementary school on Lots 18 and 19. School outdoor lighting should be designed to direct illumination downward and screened on top to minimize	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
	glare impacts on residents located in the hillside areas to the south.	
CULTURAL RESOURCES (Section 4.11)		
4.11-1: Disturbance of Historic Resources. Development of the project site could include the disturbance of identified historic structures. Although many of the historic structures appear to retain integrity of design, materials and workmanship, they do not meet the criteria for eligibility to the National Register of Historic Places or the California Register of Historic Resources. Project impacts on historic resources would be considered less than significant.	No mitigation measures are necessary.	LESS THAN SIGNIFICANT
4.11-2: Disturbance of Unidentified Cultural Resources. Development of the project site would include the removal of vegetation and surface soils through grading activities. Because Native American and historic cultural resources could be present on the project site, these grading activities could cause the disturbance of these resources. The disturbance of previously unidentified cultural resources would be considered a potentially significant project impact.	If any prehistoric or historic artifacts, or other indications of cultural resources are found once project construction is underway, all work must stop within 20 meters (66 feet) of the find. A qualified archaeologist shall be consulted for an immediate evaluation of the find prior to resuming ground-breaking construction activities within 20 meters of the find. If the find is determined to be an important archaeological resource, the resource shall be either avoided, if feasible, or recovered consistent with the requirements of Appendix K of the State CEQA Guidelines. In the event of discovery or recognition of any human remains in any on-site location, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the County coroner has determined, in accordance with any law concerning investigation of the circumstances, the manner and cause of death and recommendations concerning treatment and	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
CUMULATIVE AND GROWTH-INDUCING IMPACTS (Chapter 6)	dispositions of the human remains to the person responsible for the excavation, or to his or her authorized representative.	
The cumulative and growth-inducing impacts of the proposed project are presented in Chapter 6 of the Draft EIR. A paragraph discussion is provided for the majority of the impacts; however, a more detailed discussion of traffic impacts, including impact summaries and mitigation measures, is provided because of the greater detail available regarding future traffic operations. The cumulative traffic impacts and mitigation measures are therefore summarized below.		
6-1: Unacceptable Level of Service: First Street/Ray Street/Vineyard Avenue. Traffic generated by the buildout of the General Plan without the proposed project (and without mitigation) would result in an unacceptable level of service at the intersection of First Street/Ray Street/Vineyard Avenue. The addition of traffic generated by development of the proposed project would continue to result in an unacceptable level of service at this intersection. Severe delay and congestion would be anticipated. Therefore, this impact would be considered potentially significant.	To mitigate unacceptable levels of service at the intersection of First Street/Ray Avenue/Vineyard Avenue, the following measures should be implemented with the buildout of the General Plan: ▶ Add a second through-lane on the southbound First Street approach. ▶ Add a second through-lane on the northbound First Street approach. Mitigation would improve this intersection to V/C ratio 0.70, LOS B, during the impacted p.m. peak hour. These mitigation measures are planned by the City and funds are available.	LESS THAN SIGNIFICANT
6-2: Unacceptable Level of Service Bernal Avenue/Stanley Boulevard. Traffic generated by	To mitigate an unacceptable level of service at the intersection of Bernal Avenue/Stanley Boulevard, the	LESS THAN SIGNIFICANT

**Table 2-1
EXECUTIVE SUMMARY**

Impact	Specific Plan Measure	Level of Significance with Mitigation
buildout of the General Plan would result in an unacceptable level of service (without mitigation) at the intersection of Bernal Avenue and Stanley Boulevard. The addition of traffic generated by the proposed project to General Plan buildout would continue to result in an unacceptable level of service at this intersection. Severe delay and congestion would be anticipated. Therefore, this impact would be considered potentially significant.	following measure should be implemented with the buildout of the General Plan: ▶ Add a third through-lane on the eastbound Stanley Boulevard approach. This mitigation would improve this intersection to V/C ratio 0.86, LOS D, during the impacted p.m. peak hour and sufficiently mitigate an unacceptable level of service. This mitigation measure is planned by the City, but the City does not yet have an identified funding source.	LESS THAN SIGNIFICANT
6-3: Degradation to Unacceptable Level of Service. Isabel Avenue/Vineyard Avenue. Traffic generated by the development of the proposed project would degrade levels of service (without mitigation) at the unsignalized intersection of Isabel Avenue and Vineyard Avenue. Severe delay and congestion would be anticipated at the intersection. This impact would be considered potentially significant.	To mitigate an unacceptable level of service at the unsignalized intersection of Isabel Avenue/Vineyard Avenue the following measure should be implemented with the buildout of the General Plan and construction of the proposed project: ▶ Add a second lane on the southbound Isabel Avenue Approach. This lane would function as an exclusive right-turn lane. With mitigation, the intersection would operate at LOS B with an average delay of 8.7 seconds for the delayed movements during the impacted a.m. peak hour. This improvement is anticipated to be implemented when Isabel Avenue is widened to 4 lanes as part of the Measure B transportation projects.	SIGNIFICANT AND UNAVOIDABLE
6-4: Freeway Traffic Operations. Trips generated by the proposed project, when combined with the cumulative development planned in the region, would contribute to unacceptable traffic operations on segments of Interstates 580 (I-580) and 680 (I-680).	Project developers would be responsible for paying a pro-rata share of traffic improvements identified in the Tri-Valley Transportation Plan and the City Traffic Development Fee.	SIGNIFICANT AND UNAVOIDABLE

Table 2-1
EXECUTIVE SUMMARY

Impact	Specific Plan Measure	Level of Significance with Mitigation
Improvements to and standards for both I-580 and I-680 are included in the Tri-Valley Transportation Plan (TVTP). Because the TVTP does not provide adequate capacity to satisfy fully all future transportation demand at its established service standards, cumulative impacts on the regional transportation system would be anticipated. The development of the proposed project would contribute to that cumulative impact. This would be considered a significant and unavoidable impact.		

3 PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SETTING

REGIONAL SETTING

The City of Pleasanton is located approximately 30 miles east of San Francisco. The City is west of the northern portion of the Diablo Mountain Range, a north-south mountain range that separates the San Francisco Bay Area from the San Joaquin Valley (Exhibit 3-1). Located in the Pleasanton-Amador Valley region of northern Alameda County, Pleasanton is adjacent to the cities of Livermore and Dublin and approximately 25 miles west of Tracy. Regional access is provided by Interstate 580 (I-580), which forms the northern boundary for Pleasanton and Interstate 680 (I-680), which generally bisects the City along a north-south axis that divides the more urban areas of the City to the east from the relatively undeveloped hilly terrain to the west.

LOCAL SETTING

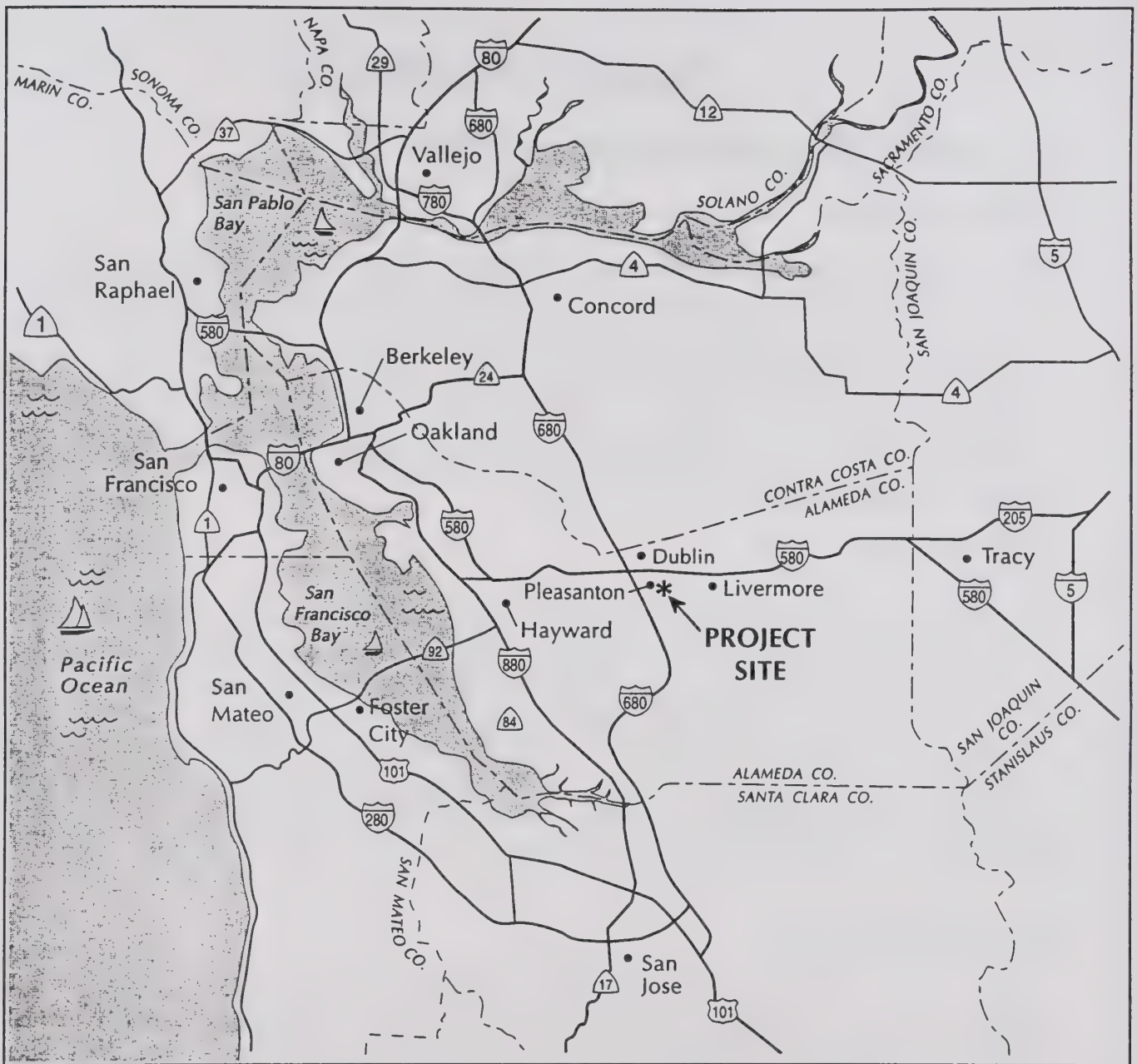
The 384-acre Vineyard Avenue Corridor Specific Plan area (Plan Area) is located in the eastern portion of the City of Pleasanton (Exhibit 3-2). The Plan Area lies approximately 2½ miles south of I-580 and 4 miles east of I-680. The Livermore Municipal Airport is situated approximately 2 miles due north of the Plan Area. The Shadow Cliffs Regional Recreational Area, Arroyo del Valle and the RMC Lonestar quarry are also located directly to the north. The Ruby Hill development abuts the eastern boundary of the Plan Area. To the south are the Grey Eagle and Foxbrough subdivisions, and open space land. The Vintage Heights development is located along the western boundary of the Plan Area. Vineyard Avenue crosses the site in a generally east-west direction and provides primary access to the existing lots on both sides of the road.

SITE CHARACTERISTICS

Elevations within the Plan Area range from 383 feet above mean sea level adjacent to Arroyo del Valle to 700 feet at the site's southwest corner. Slopes north of Vineyard Avenue are relatively flat while slopes to the south quickly increase, exceeding 45% in some areas. The Plan Area is best characterized as a "rural residential" area. It is generally comprised of large lots with single-family homes, open space, occasional cultivated areas, and occasional ancillary agricultural buildings. The entire site drains north toward the Arroyo del Valle.

For the purpose of describing the site, the Planning Area has been divided into three subareas defined by land use, topography, and environmental characteristics, as identified in Exhibit 3-3. A total of 33 lots are located within the Plan Area. The following is a description of each subarea:

Subarea 1 contains Lots 1 through 17 and is located in the western portion of the Plan Area. It consists of relatively flat land immediately south of Vineyard Avenue with terrain sloping steeply toward the south. The area is sparsely vegetated except for a stand of eucalyptus trees on Lots 8 and 9, and other scattered oak and ornamental trees.



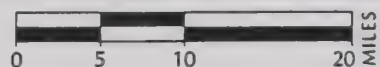
Source: EDAW, Inc., 1998.

Regional Location

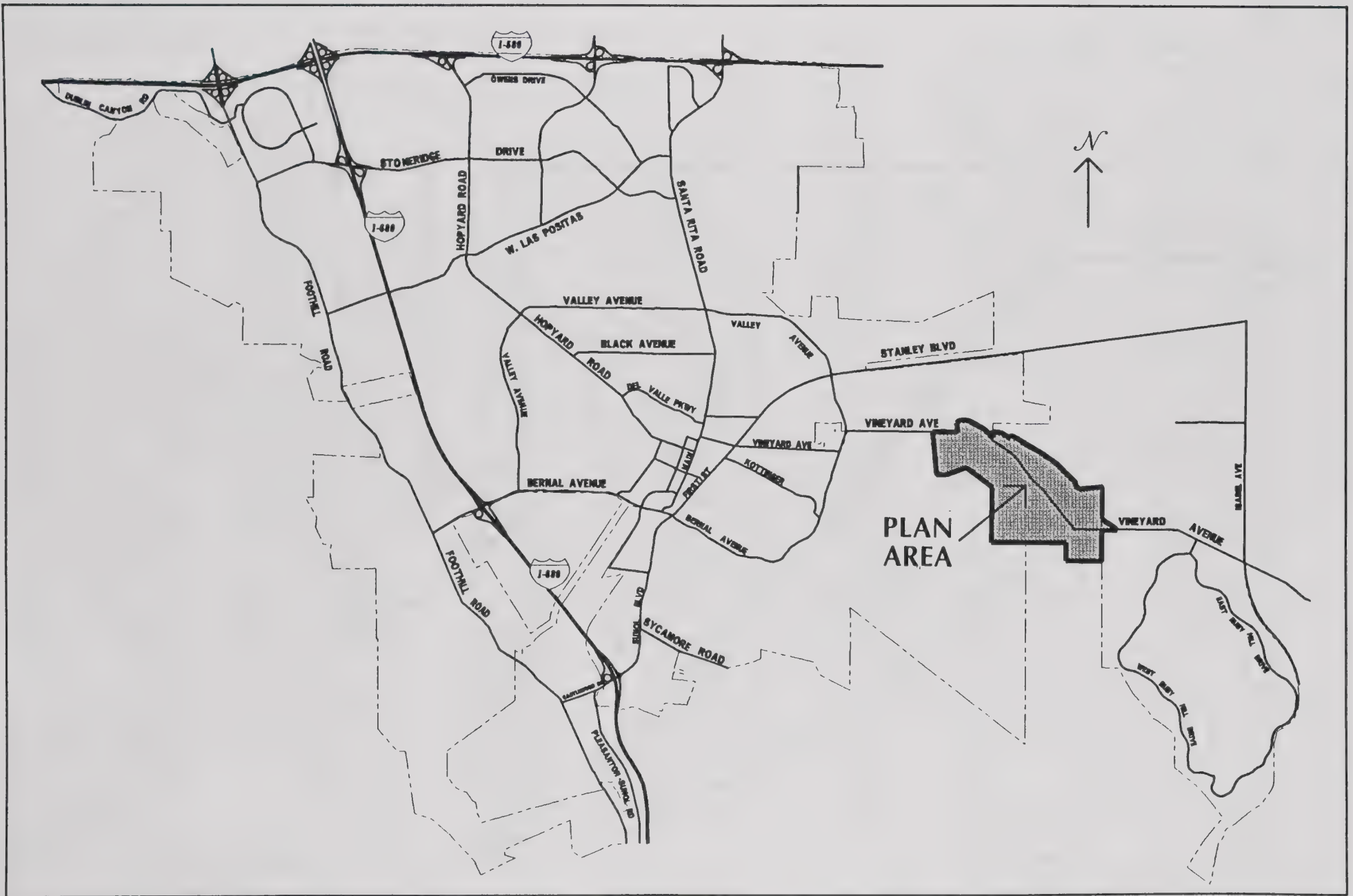
EXHIBIT 3-1

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 6/98



EDAW



Source: City of Pleasanton, 1998.

Vicinity Map

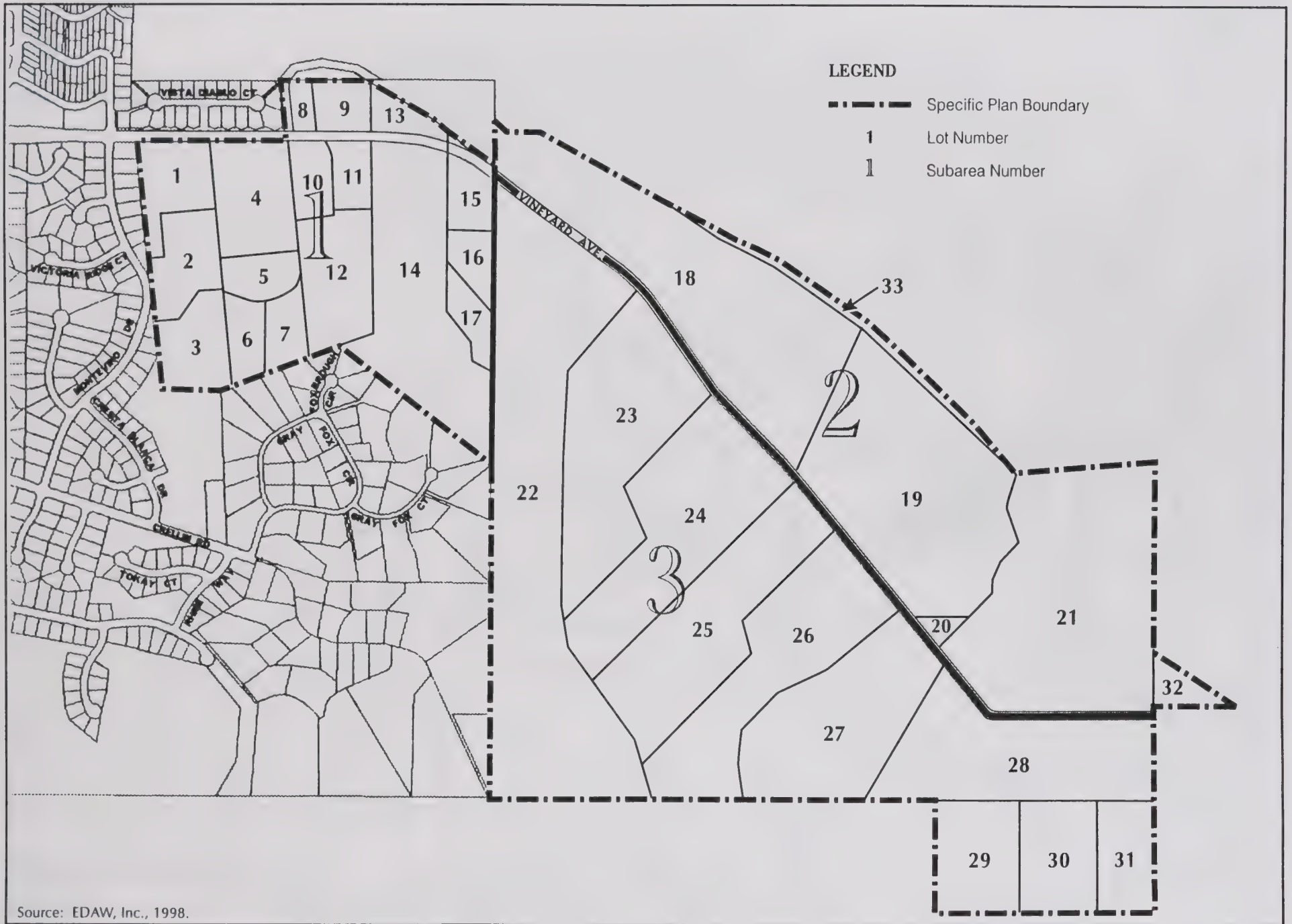
VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 6/98

EXHIBIT 3-2



EDAW



Source: EDAW, Inc., 1998.

Site Lot Map

EXHIBIT 3-3

This subarea comprises 20% of the Plan Area and consists of rural residential lots ranging in size from 0.9 to 20 acres. Many of the lots are 5 acres or less in size and contain individual homes. Lots 3, 9, 10, 11, 12, 13, and 17 are vacant. An existing private road (Clara lane) provides access to several lots located near the southern boundary. The existing Hatsushi Nursery is located at Lot 1 and the front of Lot 2. Lot 14 contains the former Pleasanton landfill site. The landfill was closed in 1976 and the lot is currently vacant except for methane gas control facilities and a caretaker's residence and kennel.

Subarea 2 includes Lots 18 through 21, 32, and 33 and is located north of the existing Vineyard Avenue alignment. Lots 18, 19 and 21 are 30± acres in size. Lot 20 is less than 1 acre. Lots 32 and 33 are small portions of larger lots. This portion of the Plan Area forms a plateau above the Arroyo del Valle and slopes gently down from Vineyard Avenue. It consists primarily of grasslands, with a dominant stand of trees near the western end. It also contains two abandoned orchards. Three drainage courses traverse the area from south to north.

This subarea comprises 29% of the Plan Area. Lots 18 and 19 contain individual homes with associated agricultural buildings. Lots 18, 19, and 21 are generally in limited agricultural use. Lot 21 is owned by RMC Lonestar and was granted a permit for gravel extraction and reclamation by Alameda County prior to its 1992 annexation to the City of Pleasanton.

Subarea 3 contains Lots 22 through 31 and is located south of Vineyard Avenue. This area is generally characterized by steeply sloping terrain that rises upward from Vineyard Avenue to the southern Plan Area boundary. Flatter areas are located along the hilltops and eastern portion of the subarea. Subarea 3 is traversed by three intermittent partially wooded drainage courses that continue north across Subarea 2. Vegetation generally consists of oak woodland in the valleys and grasslands on the ridges and hilltops. The southern boundary forms a prominent ridge that acts as the visual backdrop for the site when viewed from the outlying valley.

This hilly subarea comprises 51% of the Plan Area. It is characterized by individual homes located on hilltop lots. Lots in this area generally average 20 acres in size and contain individual homes. Most of the homes are accessed by long private driveways originating at Vineyard Avenue.

3.2 PROJECT CHARACTERISTICS

The Vineyard Avenue Corridor Specific Plan (the Plan) is intended to serve as the primary land use and regulatory guide for development of the Plan Area. The objective of the Plan is to establish a high-quality living environment that features a rural/vineyard character and provides for a variety of residential, commercial, vineyard, open space, recreational, elementary school, and other uses. The Plan sets forth the basic land use pattern, development and design standards, circulation network, infrastructure system, and implementation requirements for future development.

The proposed project would require a rezone to accommodate a series of Planned Unit Development (PUD) zoning districts and an annexation for Lots 32 and 33. The Plan Area is divided into 33 lots ranging in size from 0.9 acres (Lot 8) to 50.1 acres (Lot 22). Table 3-1 identifies the Assessor's parcel

numbers, acreage, the owners of each lot, and the address. The lots have been numbered from 1 through 33 for ease of reference throughout this document.

The proposed project would also include the realignment of Vineyard Avenue. The realigned roadway would be moved toward the northern property boundary. The abandoned alignment would provide access for pedestrians, bicycles, equestrians, and emergency vehicles. No portion of the abandoned alignment would be used for local vehicle access.

The land use plan (Exhibit 3-4) identifies the individual development areas, uses, acreages, number of proposed homes, and the planned circulation network. The number indicated within each residential development area on the plan refers to the proposed number of dwelling units to be allowed within that area. The total number of new homes proposed in the Plan Area is 189. The 19 existing home sites are identified on Exhibit 3-4.

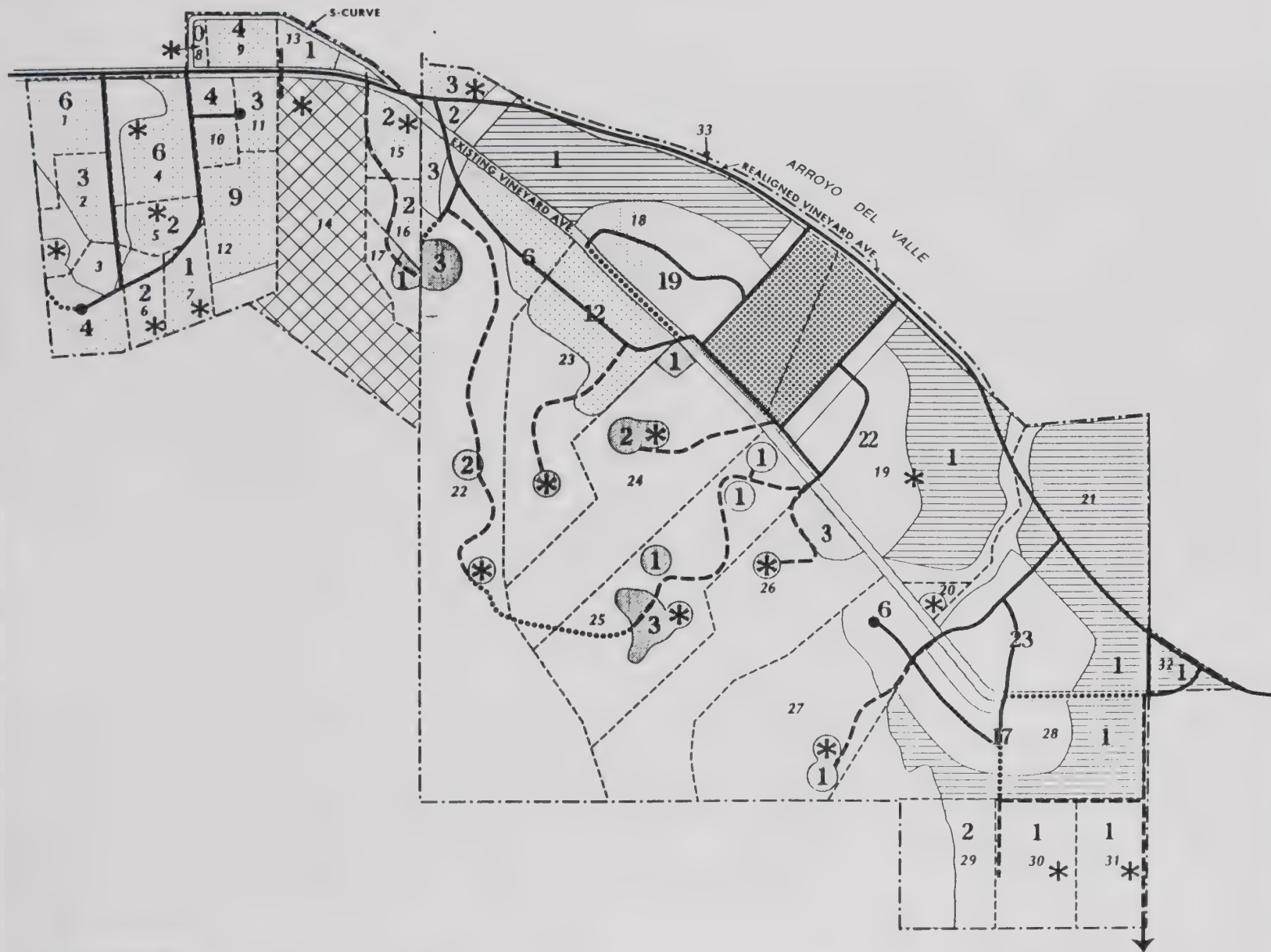
The land use plan is intended to facilitate the transition between the urbanized edge of Pleasanton to the west and the more rural, larger lot Ruby Hill development to the east. The design concept requires environmentally sensitive design of homes in the hillside areas south of Vineyard Avenue, and the integration of vineyards and other land uses north of Vineyard Avenue, organized to create an attractive visual entry to the Livermore Valley wine country.

The gently sloping hillsides in Subarea 1 are planned for low density residential development. Homes are proposed to be designed to reflect the rural character of the hillside setting. A community park proposed on Lot 14 would serve as a greenbelt buffer between the more urbanized Subarea 1 and the semi-rural Subarea 2.

Four residential sub-neighborhoods designated as “vineyard villages” and an elementary school are planned for the flatland area generally north of the existing Vineyard Avenue in Subarea 2. Vineyard Avenue is proposed to be relocated to the north along Arroyo del Valle. Vineyards are generally planned between development and the realigned roadway. The realignment of Vineyard Avenue would establish it as a scenic rural road lined with vineyards on one side and the Arroyo on the other.

The siting of residential development in Subarea 3 is intended to avoid significant natural features such as the major ridgeline and hilltop areas, woodland, and riparian corridors. Development within this subarea generally consists of clusters of custom homes designed to reflect the rural character and natural features of the hillside terrain. The majority of land within this area is proposed to be preserved as open space.

The 384-acre Plan Area is divided into four land use categories as follows: 1) residential, including possible wine country commercial-related uses on a conditional use permit basis; 2) agriculture (primarily vineyards); 3) open space; and 4) public facilities, including a 12-acre elementary school and a 20-acre community park. These four land use types are discussed in greater detail below.



LEGEND

- Specific Plan Boundary
- 1 Lot Number
- 1 Number of Planned Residential Units
- * Existing Home
- SRR Semi-Rural Residential
- HR Hillside Residential
- LDR Low Density Residential
- MDR Medium Density Residential
- Open Space
- Vineyard
- Community Park
- Elementary School
- Public Street
- Private Street
- Emergency Vehicle Access

EXHIBIT 3-4

Specific Plan

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN
JN 85002.01 12/98



**Table 3-1
Vineyard Avenue Corridor Lot Ownership**

Lot No.	Assessor's Parcel No.	Acres	Owner	Address
1	946-1735-018-02	5.00	Kazuo and Takiko Hatsushi	2756 Vineyard Avenue
2	946-1735-019-00	5.02	Kazuo Hatsushi	2770 Vineyard Avenue
3	946-1735-020-00	5.02	Kazuo and Takiko Hatsushi	2798 Vineyard Avenue
4	946-1735-024-02	7.24	Lewis C. and Clara A. Nevis Trs.	2546 Vineyard Avenue
5	946-1735-023-00	2.66	Daryl A. and Ronald N. Halverson Trs.	751 Clara Lane
6	946-1735--22-00	2.45	A.F. and Janet Elgammal	865 Clara Lane
7	946-1735-021-00	2.49	Ronald N. and Marian M. Halverson	837 Clara Lane
8	946-1735-007-02	0.87	C.M. and Marie E. Allec Trs.	2538 Vineyard Avenue
9	946-1735-029-03	2.56	Don R. Hubbard	2756 Vineyard Avenue
10	946-1735-031-02	2.50	Lutz Homes	Vineyard Avenue
11	946-1735-030-00	2.30	Gary & Deborah Oetman, et al.	Vineyard Avenue
12	946-1735-032-00	7.37	Brian K. and Shirley Mcguire	Vineyard Avenue
13	946-1735-008-02	1.55	Molinaro	Vineyard Avenue
14	946-1735-008-03	20.51	Pleasanton Garbage Service Inc.	Vineyard Avenue
15	946-1735-026-02	2.62	Anthony L. Pietronave	2500 Vineyard Avenue
16	946-1735-027-00	2.43	Michael W. and Linda M. Dominisse	Vineyard Avenue
17	946-1735-028-00	2.41	Dennis G. and L. Homer	Vineyard Avenue
18	946-1350-014-00	35.38	Wayne and Betty A. Hahner	2287 Vineyard Avenue
19	946-1350-013-00	33.30	Brian C. Lin	1689 Vineyard Avenue
20	946-1350-012-00	0.87	Douglas E. and Mary M. Safreno Trs.	1627 Vineyard Avenue
21	946-1350-011-00	29.84	Lonestar RMC	1465 Vineyard Avenue
22	946-1350-015-09	50.13	Frank Berlogar Tr.	2200 Vineyard Avenue
23	946-1350-015-08	20.00	Kenneth R. and Pamela L. Chrisman	1944 Vineyard Avenue
24	946-1350-015-07	20.00	Steve J. and Anabelle A. Brozodky	1700 Vineyard Avenue
25	946-1350-015-06	20.19	Kenneth E. Konig Jr. Tr.	1680 Vineyard Avenue
26	946-1350-015-05	20.51	Ford G. and Mary L. Roberts	1666 Vineyard Avenue
27	946-1350-015-04	20.00	Michael J. Goodwin	1630 Vineyard Avenue
28	946-1350-015-03	21.3	Robert and Sharen Heinz Trs.	Vineyard Avenue
29	950-0005-005-00	7.70	Silver Bear	Vineyard Avenue
30	950-0005-006-00	7.11	Leonard R. Thibault	Vineyard Avenue
31	950-0005-004-00	5.50	Paul J. Faglinao	1364 Vineyard Avenue
32	950-0006-003-01	4.00	Romarita M. Simoni Tr.	Vineyard Avenue
33	946-1350-009-09	3.00	RMC Lonestar	Vineyard Avenue
	Existing Streets	9.00	City of Pleasanton	Vineyard Avenue

Source: City of Pleasanton 1998

RESIDENTIAL

The Plan Area includes four residential designations: Semi-Rural Residential, Hillside Residential, Low Density Residential, and Medium Density Residential.

Semi-Rural Residential - The Semi-Rural (SR) district permits single-family homes on approximately 2.5-acre minimum-sized lots. A total of four new SR lots are proposed in the Plan Area. Existing and future agricultural uses are encouraged within this district. Land designated SR is located in Subarea 3 on Lots 29, 30 and 31. These lots are intended to provide a transitional buffer between residential uses to the north and the large acreage to the south.

Hillside Residential - The Hillside Residential (HR) district is intended to allow for a clustering of homes in well-defined areas of the hills in order to preserve natural features such as ridgelines, hilltops, oak woodland, creeks, and steep slopes. A total of 19 new lots are proposed within this district. Development areas consist of home sites on 40,000-square-foot minimum-sized lots. Open space land surrounding HR development areas is to be permanently preserved.

Low Density Residential - The Low Density Residential (LDR) category allows for a suburban residential development with minimum lot sizes of 20,000 square feet. A total of 81 new LDR homes are proposed. The LDR development area is located in the rolling hills in Subarea 1 south of Vineyard Avenue (Lots 1-13 and 15-16). The LDR designation is intended to provide a transitional density between the existing Medium Density development located west of the Plan Area and the Hillside Residential and Open Space uses within the Plan Area. Low Density Residential is also proposed for the lower portions of Lots 22, 23, and 27, where the slopes are more gentle and the terrain is generally free of trees.

Medium Density Residential - The Medium Density Residential (MDR) category is concentrated in the more accessible and flatter portions of the Specific Plan Area, north of the existing Vineyard Avenue and on Lot 28. A total of 80 single-family MDR homes are proposed. These areas are intended to be developed as individual neighborhoods with a design character compatible with the “vineyard village” concept described later in this document.

Lot 28 would also have the option of developing a 100-room inn/spa/restaurant/conference facility and a vineyard estate lot instead of 17 housing units.

VINEYARDS

A key land use component of the Specific Plan is the development of new vineyards and/or related agricultural uses. Vineyards would integrate the character of the Plan Area with the Ruby Hill development and the outlying Livermore Valley wine country to the east. The Specific Plan provides for 67 acres of vineyards on generally flat land. The vineyards are intended to reinforce agriculture within the area, create a pleasing visual experience for motorists traveling on Vineyard Avenue, and buffer future residential neighborhoods from traffic noise on Vineyard Avenue.

OPEN SPACE

The areas designated as Open Space (OS) are intended to preserve the natural features of the hillside areas south of the existing Vineyard Avenue. No homes are permitted within the OS area; however, limited agricultural uses are permitted. The OS designation also includes the three riparian corridors on the project site (one at the northwest end of Lot 18, and the second and third near the western and eastern boundaries of Lot 19) and a buffer between the northeast corner of the elementary school and vineyards on Lot 18.

PUBLIC FACILITIES

Proposed development of a 20-acre community park is intended to serve the Plan Area residents and the outlying community. Specific uses could include unlighted ball fields, picnic areas, trails, and passive landscaped open space/buffer areas between the park and neighboring homes.

Proposed development of a 12-acre elementary school is also intended to serve the needs of Plan Area children and the outlying residential areas to the east and west. Approximately six acres of building and parking areas are planned along with six acres of paved and turf playing areas.

DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

All development proposals within the Specific Plan Area are subject to the City's Planned Unit Development (PUD) plan review and approval process, and all residential projects are subject to the City's Growth Management Program. These are important planning steps that allow for detailed implementation of the Specific Plan. Standards and design guidelines are provided in the Specific Plan for each of the Plan land use designations.

3.3 PROJECT HISTORY

In 1992, at the request of a group of Vineyard Avenue Corridor property owners and by recommendation of the Planning Commission, the City Council directed the Planning Department to prepare a specific plan for the Vineyard Avenue Corridor area. A cooperative planning effort was then initiated whereby City staff worked with City consultants and consultants representing the property owners. A series of neighborhood meetings were held to develop a draft plan. In May 1993, the City Council referred all planning work completed to that point to the General Plan Steering Committee for its consideration during the comprehensive General Plan Update that had just gotten underway.

A variety of land use and circulation alternatives for the Vineyard Avenue Corridor were considered by the General Plan Steering Committee. In August 1996, the Council adopted the General Plan Update. The Land Use Element of the updated General Plan included guidance for the planning of the Vineyard Avenue Corridor area as follows:

“Due to the complexity of planning issues raised by the Vineyard Corridor, a Specific Plan should be prepared to coordinate land uses, densities, aesthetics, circulation, and infrastructure requirements. Future land use designations should consist of Agriculture and Grazing; Rural,

Low, and Medium Density Residential; Parks and Recreation; and Commercial. Other possible uses should also be considered that relate to the outlying wine country, including ‘country’ restaurants, bed-and-breakfast inns, wineries, wine-tasting rooms, tourist information, art galleries, museums, bicycle rentals, etc. The Specific Plan should include a target of 150 housing units. An attractive gateway to the Livermore Valley wine country should be accomplished by developing Vineyard Avenue into a scenic road entry, preserving substantial open space, planting vineyards, and implementing a wine country architectural and landscape design theme throughout the Corridor.”

3.4 PROJECT OBJECTIVES

The following objectives were established to serve as the foundation for the Specific Plan. Objectives are based upon guidance from the General Plan, the South Livermore Valley Area Plan, the site constraints and opportunities analysis, professional input, property owner input, and the public hearing process.

LAND USE OBJECTIVES

- ▶ Establish a mix of land uses that promote the Plan Area as the western entry to the Livermore Valley wine country, and provide an appropriate transition between the existing urbanized edge of Pleasanton to the west and the Ruby Hill development to the east.
- ▶ Reserve centrally located sites for an elementary school and community park within the Plan Area to serve the existing and future needs of residents in the Plan Area, Ruby Hill, and the greater east Pleasanton area.
- ▶ Create a strong recreationally oriented neighborhood that integrates housing with on- and off-site open space, Arroyo del Valle, Shadow Cliffs Regional Recreation Area, community park, and elementary school.
- ▶ Encourage the development of vineyard related commercial uses such as an inn, spa, restaurant, conference facility, bed-and-breakfast, winery, etc.
- ▶ Re-establish a substantial area of vineyards to utilize the productive quality of the soils and create an “anchor use” to which the character of future development can relate.
- ▶ Buffer housing from noise, dust, and vibration impacts associated with the quarrying operation to the north and traffic on Vineyard Avenue.
- ▶ Preserve the major ridgeline in the southern Plan Area, limit development of hilltop areas to homes that can be substantially screened from outlying views, and limit hillside development to areas that can physically and visually accommodate it without disrupting the natural character of the site.
- ▶ Ensure that future development of the hilly areas located south of Vineyard Avenue is designed to emphasize the rural character through careful siting of buildings, minimal disruption to the physical terrain, and sensitive architectural and landscape treatments.

- ▶ Establish a unified site planning, architectural, and landscape character for future development on Lots 18, 19, 21, and 28 that draws from the character of the Livermore Valley wine country, as well as from the approved Ruby Hill architectural design concepts, and the traditions of Southern European “vineyard village” design.
- ▶ Provide for safe and functional re-use of the old Pleasanton landfill site.
- ▶ Protect applicable open space areas for the production of natural resources such as aggregate mining materials.

CIRCULATION OBJECTIVES

- ▶ Develop a safe and convenient circulation system to accommodate planned growth within and beyond the Plan Area and that meets City traffic level of service standards.
- ▶ Realign Vineyard Avenue along the Arroyo del Valle to reduce noise in the center of the Plan Area and to accommodate safer and more convenient travel.
- ▶ Ensure adequate access for emergency vehicle service to all new homes.
- ▶ Provide an alternative to vehicular travel throughout the Plan Area by way of an integrated system of pedestrian, bicycle, and equestrian trails.
- ▶ Provide adequate public transit connections to the outlying region.
- ▶ Establish Vineyard Avenue as a scenic entry to the wine country through the use of rural road standards, implementation of a generous landscape program that features native tree plantings, colorful landscaping accents and compatibility with the Ruby Hill landscape design program.

PUBLIC FACILITIES OBJECTIVES

- ▶ To facilitate the provision of water, sanitary sewer, storm water drainage, and other utilities within a well integrated overall network.
- ▶ To facilitate flexibility in the timing and planning of infrastructure improvements.
- ▶ To provide the opportunity for improved water and sewer service for existing residents within the Plan Area.

ENVIRONMENTAL PRESERVATION OBJECTIVES

- ▶ Protect special status plant and wildlife species.
- ▶ Permanently preserve significant woodland, riparian habitat areas, wetlands and wildlife corridors.
- ▶ Preserve and protect existing heritage trees wherever possible.

- ▶ Protect all known and discovered significant archaeological and historical resources within the Plan Area.

INFRASTRUCTURE FINANCING OBJECTIVES

- ▶ To implement a fair and equitable method of spreading the costs of financing infrastructure improvements.
- ▶ To establish an efficient and coordinated program of phasing infrastructure improvements which allows private development, an elementary school, and a community park to develop in as timely a manner as feasible.

4 ENVIRONMENTAL SETTING, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

INTRODUCTION TO ENVIRONMENTAL ANALYSIS

The preparation of this EIR has taken place in tandem with the preparation of the Specific Plan. The Specific Plan has taken advantage of concurrent CEQA review by incorporating provisions that avoid or minimize adverse impacts that might otherwise be associated with site development. In each resource category evaluated in Chapter 4, the Specific Plan design characteristics and development requirements that are intended to reduce development impacts are identified. These design characteristics and development requirements of the Specific Plan are intended to “pre-mitigate” impacts that would otherwise occur with site development, thereby reducing both adverse impacts and the mitigation requirements.

Sections 4.1 through 4.11 contain a discussion of the environmental setting, thresholds of significance, environmental impacts, mitigation measures, and level of significance after mitigation. The issues evaluated in these sections consist of the significant and potentially significant environmental issue areas identified for review in the Notice of Preparation (NOP), found in Appendix A. These sections are organized into the following major components:

Existing Conditions: This subsection presents the existing regional and local environmental conditions, in accordance with the State CEQA Guidelines §15125. The “Existing Conditions” subsection describes the baseline conditions against which the environmental impacts associated with the proposed project and the potential future development of the property are assessed.

Environmental Impacts: This subsection presents thresholds of significance used in the Draft EIR and discusses potential significant effects associated with the proposed project on the existing environment, in accordance with State CEQA Guidelines §§15126(a) and 15143. The thresholds of significance are presented at the beginning of each subsection. *Project impacts are numbered sequentially throughout these sections.* Therefore, impacts in Section 4.2 are numbered 4.2-1, 4.2-2, 4.2-3, etc. Impacts identified in Section 4.3 are numbered 4.3-1, 4.3-2, and so on. A bold font impact statement precedes the discussion of each impact and provides a summary of each impact and its level of significance. The discussion that follows the impact statement includes the substantial evidence upon which a conclusion is made as to whether the impact would be significant or less than significant. A discussion of cumulative impacts is provided in Chapter 6, Cumulative and Growth-Inducing Impacts. The cumulative transportation and circulation impact analysis is included in Section 4.7.

Specific Plan Measures: This subsection provides Specific Plan measures to reduce potentially significant effects associated with the proposed project to the extent feasible, in accordance with State CEQA Guidelines §§15002(a)(3), 15021(a)(2), and 15091(a)(1). *The Specific Plan measures are numbered corresponding to the impacts that they address.* For example, Specific Plan Measure 4.2-1 would mitigate Impact 4.2-1. These measures are directly integrated into the Specific Plan and are referenced in this document as they related to individual project impacts.

Level of Significance After Mitigation: This subsection describes whether Specific Plan measures would or would not reduce an impact to a less-than-significant level. This section is presented in accordance with State CEQA Guidelines §15126(b), which requires identification of significant unavoidable impacts. Significant unavoidable impacts are also summarized in Section 2.7 (Significant and Unavoidable Environmental Impacts).

4.1 LAND USE

This section contains a discussion of the existing land use and planning setting within the Plan Area and surrounding areas. An analysis of potential land use and planning impacts associated with the proposed project is provided as well as measures included in the Specific Plan to reduce significant impacts.

4.1.1. EXISTING CONDITIONS

This section includes a discussion of the existing land use and planning setting, including the applicable regulatory framework.

ON-SITE LAND USE

The Plan Area is divided into 33 lots ranging in size from 0.9 acres (Lot 8) to 50.1 acres (Lot 22). The Plan Area contains 19 existing homes, several agricultural buildings, two abandoned orchards, areas used for cattle grazing, vineyards, a nursery, and a former landfill. The nursery, Hatsushi Nursery, is located on Lot 1 and the northern portion of Lot 2. The former Pleasanton landfill, which was closed in 1976, is located on Lot 14. This lot is vacant except for methane gas control facilities, a caretaker's residence, and some large storage bins. Lot 21 contains aggregate mining deposits which are regulated by an existing mining permit and approved reclamation and specific plan.

SURROUNDING LAND USES

The Arroyo del Valle is located immediately to the north of the Plan Area near Lots 18, 19, 21, 32, and 33. The Arroyo area is currently subject to extensive aggregate mining and processing operations conducted by RMC Lonestar. The Shadow Cliffs Recreational Area, a regional park owned and maintained by the East Bay Regional Park District (EBRPD), is located to the north along the Arroyo del Valle. The Grey Eagle and Foxbrough subdivisions, and open space land used for cattle grazing, are located to the south of the Plan Area. To the east, a buffer of open space (future vineyards) separates the Plan Area from the neighboring Ruby Hill residential development. On the west, the Plan Area is bordered by the Vintage Heights development.

CITY OF PLEASANTON GENERAL PLAN

The City of Pleasanton General Plan, adopted August 6, 1996, identifies goals, policies, and programs for land within its 48,000-acre Planning Area. The General Plan Planning Area includes the City of Pleasanton's 27,200-acre Sphere of Influence (SOI), the 14,300-acre incorporated city limits, and areas within the jurisdiction of Alameda County that have been given land use designations on the Pleasanton General Plan Map. The SOI contains lands over which Alameda County has zoning control which may be annexed into the City in the future, as well as land incorporated within the city limits. Pleasanton exercises zoning control and provides public services to areas included within the city limits. The proposed project is located within the City limits.

Urban Growth Boundary

The Urban Growth Boundary (UGB) identified on the General Plan Map designates the limit of lands planned for urban development at buildout of the General Plan. The line separates areas which are deemed suitable for urban development from areas generally suitable for the long-term protection of natural resources, large lot agriculture and grazing, parks and recreation, public health and safety, wildlands, buffers, and scenic ridgelines. The UGB is intended to be permanent and to define the line beyond which urban development will not occur. The Plan Area is within the UGB, which forms the border along portions of the southern and northern sections of the Plan Area.

Areas of Special Interest

The Vineyard Avenue Corridor is identified as an “Area of Special Interest” in the Land Use Element of the General Plan. Areas of Special Interest include lots which present complex planning issues. According to the General Plan, a specific plan is required for development of the Vineyard Avenue Corridor due to the complexity of planning issues in this area (i.e., aesthetics, circulation, infrastructure requirements, etc.). The General Plan further states that “Future land use designations [within the Plan Area] should consist of Agriculture and Grazing; Rural, Low, and Medium Density Residential; Parks and Recreation; and Commercial.” Pursuant to the General Plan, the Specific Plan should include a target of 150 housing units. Other possible uses should also be considered which relate to the outlying wine country, including “country” restaurants, bed-and-breakfast inns, wineries, wine-tasting rooms, tourist information, art galleries, museums, bicycle rentals, etc. Overall, the Plan should create an attractive gateway to the Livermore Valley wine country by developing Vineyard Avenue into a scenic road entry, preserving substantial open space, planting vineyards, and implementing a wine country architectural and landscape design theme throughout the Corridor (City of Pleasanton, 1996).

General Plan Land Use Designations

The General Plan establishes fourteen land use categories within which development must be consistent. The spacial location of these categories, or designations, are illustrated on the General Plan Map. All projects proposed within the City’s General Plan Planning Area must conform to the land use designations specified on the General Plan Map.

As described above, the Plan Area is identified on the General Plan Map (1996) as “Specific Plan Area.” All properties lying within the boundaries of a Specific Plan Area would be subject to the land uses, densities, public improvements, and other requirements specified in the Specific Plan prepared for the area. The Specific Plan Area designation denotes “that land uses and densities are conceptual only and may change subject to the outcome of the specific plan.” A General Plan Amendment is necessary to identify new land uses.

Relevant General Plan Policies and Programs

The following land use policies and programs included within the General Plan Land Use Element are applicable to the proposed project:

Policy 2 (Overall Community Development - Residential):

Develop new housing in infill and peripheral areas which is adjacent to existing residential development.

Program 2.1: Zone vacant infill sites at densities to encourage development while respecting the character of surrounding uses.

Policy 8 (Community Facilities):

Provide a diversity of community facilities to maintain and improve service levels for existing and future residents.

Program 8.2: Cooperate with the School District to enhance the quality of education, anticipate and construct school facilities as they become needed, and maximize joint use of school buildings and City parks and playgrounds.

Policy 9 (Community Facilities):

Provide each major residential area with high quality neighborhood facilities including a park and other amenities, and encourage the location of an elementary school.

Program 9.1: Adopt Specific Plans for developing large land holdings to identify facility needs and establish development guidelines.

Policy 10 (Open Space):

Preserve open space areas for the protection of public health and safety, the provision of recreational opportunities, use for agricultural and grazing, the production of natural resources, the preservation of wildlands, and the physical separation of Pleasanton from neighboring communities.

Program 10.1: Preserve open space by way of fee purchase, conservation and scenic easements, transfer of development rights, Williamson Act contracts, open space zoning categories, etc.

Program 11.4 Encourage lower intensity uses immediately inside the UGB, as necessary, to prevent potential land use conflicts with outlying non-urban uses.

Policy 12: Preserve scenic hillside and ridge views and the Pleasanton, Main and Southeast Hills ridges.

Program 13.7: Use design features in new development and redeveloped areas to encourage transit, bicycle, and pedestrian access, such as connections between activity centers and residential areas, and road design that accommodates transit vehicles.

Policy 17 (Growth Management):

Encourage development in locations which would complete or install planned public facility systems.

Program 17.1: Use the Growth Management Program to select for early development projects which complete and/or install critical portions of the City's Planned public facility system.

Program 17.2: Invest in public facilities and amenities that support the infill of development.

Zoning

The City's Zoning Ordinance defines land use types and densities, building heights, parking and other requirements of development. Zoning designations include a specific list of uses allowed within a particular zone. These may include uses compatible with the main use but different in type (e.g., a church in an industrial zone). Zoning designations must be consistent with the General Plan Map.

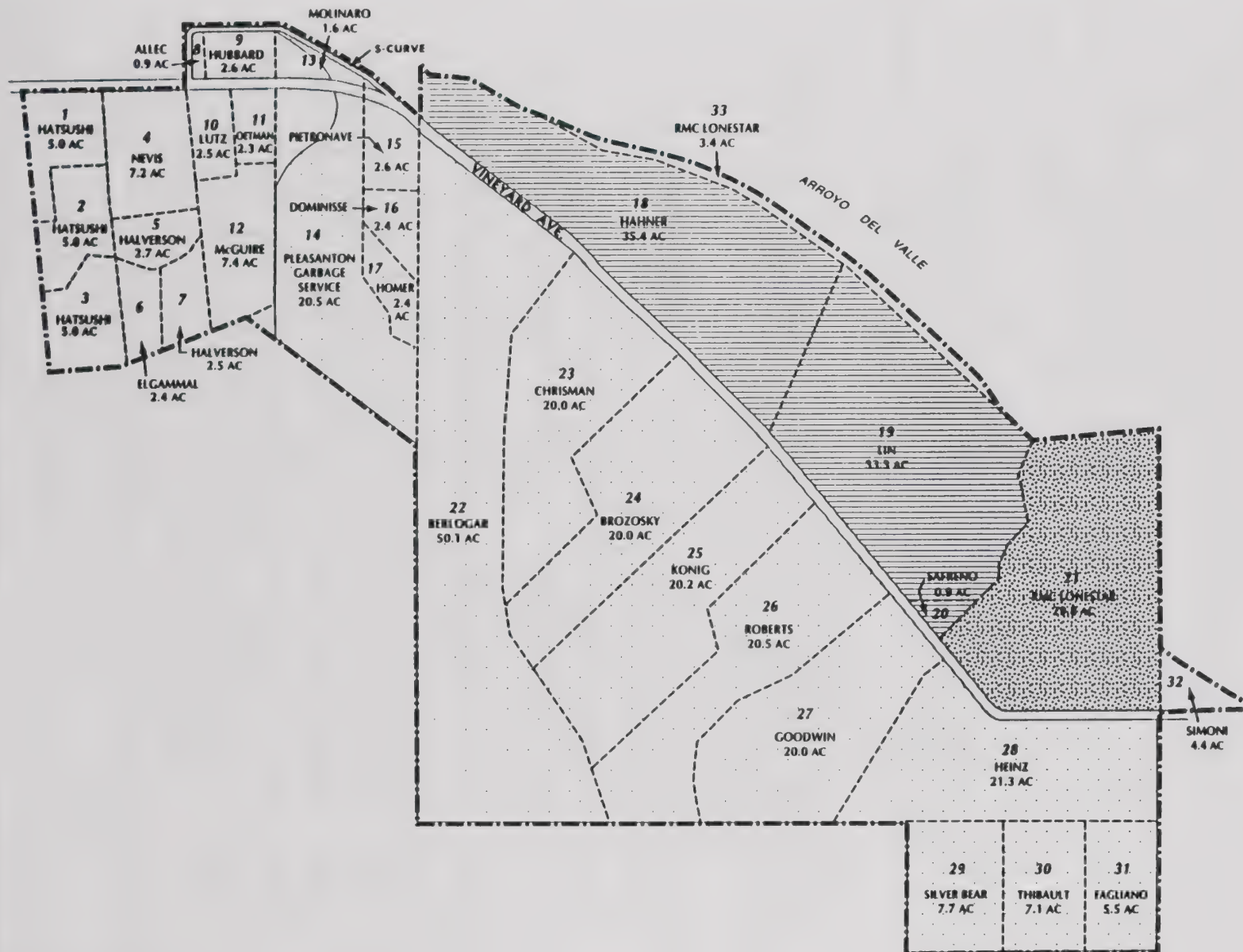
Specific plans require the adoption of City PUD zoning for all land within the Plan Area. PUD zoning accommodates features which would be difficult to develop under standard zoning (e.g., hillsides) as well as unique features (e.g., drainageways, open space). The Plan Area has four PUD zoning designations within its boundary: PUD-Low Density Residential (0 to 2 units per acre), PUD-Agriculture (provides for a full range of agriculture operations including vineyards), PUD-Rural Density Residential (minimum 5-acre lots) and PUD-Sand and Gravel Harvesting (aggregate mining operations) (Exhibit 4.1-1).

4.1.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the State CEQA Guidelines, a project may be deemed to have a significant land use and planning impact if it would:

- ▶ Conflict with adopted environmental plans and goals of the community in which it is located [e.g., the General Plan];
- ▶ Displace a large number of people;
- ▶ Disrupt or divide the physical arrangement of an established community;
- ▶ Conflict with established recreational, educational, religious, or scientific uses of the area; or
- ▶ Convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land.



LEGEND

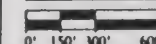
- Specific Plan Boundary
- 1 Parcel Number
- PUD - LDR
Low Density Residential
- PUD - A
Agriculture
- PUD - RDR
Rural Density Residential
- PUD - S&G
Sand and Gravel

NOTE:
PUD = Planned Unit Development

EXHIBIT 4.1-1

Existing Zoning

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN
JN 85002 01 10/98



EDAW

In addition, for the purposes of this land use analysis, a project may further be deemed to have a significant land use and planning impact if it would be incompatible with existing onsite and adjacent uses.

SPECIFIC PLAN GUIDELINES

The Specific Plan includes land use and development standards that identify permitted uses for residential areas, vineyard areas, open space, a community park use, and a school. Conditional uses are identified for residential and vineyard areas and non-conforming uses are identified for the residential areas. Design guidelines are also provided in the Specific Plan for each of the land use categories that are applicable to site planning, architecture, landscaping and grading. In addition, the Specific Plan includes measures that are intended to reduce potential land use impacts to less-than-significant levels. These measures are included at the end of this section.

PROJECT IMPACTS

Impact
4.1-I

Site Rezone. The proposed Specific Plan project requires a site rezone. The proposed zoning designations would be consistent with the land use designations proposed in the Specific Plan. Therefore, no significant impacts would be anticipated.

The proposed project includes the following land use designations in the Specific Plan: Rural Density Residential, Low Density Residential, Medium Density Residential, Public and Institutional (Elementary School), Public Health and Safety, Parks and Recreation (Community Park), and Agriculture and Grazing. The following is a summary of the land use designations:

Rural Density Residential - No more than 0.2 dwelling units per gross developable acre. Clustering of development shall be encouraged with lots of one acre and larger.

Low Density Residential - Less than two dwelling units per gross developable acre.

Medium Density Residential - Between two and eight dwelling units per gross developable acre.

Public and Institutional (Elementary School) - Any public or private educational facility.

Public Health and Safety - Land set aside for the protection of the public health and safety due to geologic, topographic, fire or other hazards. No development is allowed in these areas other than one single-family home on existing lots of record as of September 16, 1986 which meet City requirements for access, public safety, building site and architectural design, etc.

Parks and Recreation (Community Park) - A park which serves the entire community. It may provide parking areas, restrooms, and facilities for community activities, and may be scheduled for group use. Such parks may have a specific focus such as sports fields, tennis courts, or a swimming pool. No significant development is allowed in these areas.

Agriculture and Grazing - Land or buildings used for the production of agriculture or the grazing of animals. No significant development is allowed in these areas.

The proposed project requires a rezone of the land within the Plan Area to a series of Planned Unit Development (PUD) zoning districts. Four PUD zoning designations (PUD-Low Density Residential, PUD-Agriculture, PUD-Rural Density Residential, and PUD Sand and Gravel) currently existing within the Plan Area that would be changed to PUD-Open Space, PUD Vineyard (which includes aggregate mining on Lot 21 as a permitted use), PUD-Hillside Residential, PUD-Semi-Rural Residential, PUD-Low Density Residential, PUD-Medium Density Residential, PUD Park and PUD-Public and Institutional (Elementary School) to match the Specific Plan. These zoning designations are allowable under the proposed land use categories identified for the Plan Area. Therefore, no impacts would be anticipated.

Impact
4.1-2

Conversion of Agricultural Land. Development of the Plan Area would result in the conversion of agricultural land to suburban uses. This would reduce the total area of agricultural lands within the City. The conversion of vacant portions of the project site to vineyard or other agricultural operations would minimize this impact. Also, no farmland of Statewide or Local Importance is located within the Plan Area. Therefore, the conversion of agricultural lands to suburban uses would be considered a less-than-significant impact.

Development of the proposed project would introduce new suburban land uses into a predominantly rural residential area with agricultural and open space uses. The incorporation of vineyards or other agriculture within the Specific Plan would minimize the loss of other agricultural operations. Estate sized lots suitable for vineyard cultivation are proposed on flat portions of the Plan Area near the Arroyo del Valle. The vineyard uses and other possible related agricultural operations would maintain the agricultural character of the Plan Area.

The Plan Area currently contains several Williamson Act Contracts. A Williamson Act contract requires agricultural property to remain an agricultural economic unit for a minimum period of 10 years thereby ensuring that it will remain in agricultural uses. The land owner of the property by establishing a Williamson Act contract on a lot benefits by having a lower assessed property value, and thus, lower property taxes than if it was assessed based on its development potential. The contract remains in effect until a non-renewal is requested. The contract expires 10 years following the non-renewal request. A contract on Lot 22 was not renewed as of 1991 and will expire January 1, 2000. Similarly, a contract on Lot 28 was not renewed as of 1993 and will expire as of January 1, 2002.

A request for non-renewal was recently submitted for Lot 21. The contract on this lot will, therefore, expire in approximately 10 years. Residential uses could not be developed on these lots until the Williamson Act contracts have expired. The development of these lots with residential uses could occur following expiration of these contracts. Also, owners can buy out a Williamson Act contract early by prepaying the tax savings that would be expected over the 10-year term of the contract, thus allowing earlier development of residential uses. Lot 21, owned by RMC Lonestar, has been permitted for aggregate mining. Aggregate mining operations would not be inconsistent with Williamson Act contract requirements if this lot is mined within the next 10 years.

Although past and present vineyards in and around the project site indicate that soils are suitable for vineyard cultivation, the Plan Area does not contain any farmland of Statewide or Local Importance (California Department of Conservation, 1995). Therefore, development of suburban uses in the Plan Area would not convert agricultural land of Statewide or Local Importance to non-agricultural uses. Further, because the Plan Area would preserve areas for agriculture and allow existing agricultural operations to continue, the project would not impair the agricultural productivity of the site. Therefore, impacts involving conversion of agricultural lands to suburban uses would be considered less than significant.

Impact
4.1-3

Land Use Conversion - Open Space to Suburban Uses. Development of the Specific Plan would convert limited undeveloped open space to suburban uses. However, the preservation of open space is a key feature of the Specific Plan. Hillside on the southern portion of the Plan Area would be retained as primarily open space with limited clustered residential development. Additionally, open space buffers are proposed to separate uses on the flatter portions of the Plan Area near the Arroyo del Valle. The conversion of open space to suburban uses would, therefore, not result in significant impacts.

The Plan Area currently encompasses 19 residential dwellings and several agricultural structures. The majority of the project site, however, is undeveloped open space with minor agricultural activities. The Specific Plan retains the large majority of the undeveloped open space areas on the hillsides in the site's southern portion. The open space designation is intended to preserve the natural features of the hillside areas south of the existing Vineyard Avenue. Homes are clustered on Lots 22 through 27 to preserve ridgelines, scenic hillsides, and the three riparian corridors (one at the northwest end of Lot 18, and the second and third near the western and eastern boundaries of Lot 19). Open space buffers are also incorporated between areas proposed for development on flatter portions of the Plan Area. Design of the Plan would be consistent with Land Use Policy 10 (Open Space) which directs preservation of open space, and Program 10.1 (open space zoning). Because a large portion of the Plan Area would be retained as open space and the project is consistent with the applicable General Plan plans and programs, conversion of open space to suburban uses would not cause significant land use impacts.

Impact
4.1-4

Land Use Compatibility - Residential with Agricultural Land Uses. The proposed Specific Plan designates areas in the northern portion of the Plan Area for vineyards and other potential agricultural operations. An existing vineyard use on Lot 26 would also continue after implementation of the proposed Plan. Land use compatibility conflicts could occur between the proposed residential uses and existing and proposed agricultural operations. Residents could potentially be exposed to dust, pesticides, fertilizers, odors and noise associated with agricultural operations and in turn could oppose and seek the termination or a reduction in the agricultural uses within the Plan Area. This is considered a potentially significant land use compatibility impact.

Agriculture has historically been an important facet of Pleasanton's character. Several lots in the Plan Area are currently used for vineyard cultivation and cattle grazing. To preserve the agricultural heritage

of the area, new vineyards are proposed to integrate the character of the Plan Area with the Ruby Hill development and Livermore wine country to the east. The Plan proposes vineyards or potentially other agricultural uses on estate sized lots in the flatlands generally along the northern portion of the Plan Area (Exhibit 3-5).

The introduction of residential and school uses into rural areas, such as the Plan Area, could cause conflicts with existing and proposed agricultural operations. New residents and their pets bring noise, traffic and possible trespassing onto neighboring farms. Conversely, new residents often have concerns about noise from equipment operations, dust generated during harvesting and cultivating, pesticide spraying, fertilizing, livestock odors and other operations associated with agricultural uses. (Please refer to the discussion of impacts associated with agricultural operations included in Section 4.5, Noise, and Section 4.9, Public Health and Safety, of this report.) These potential land use compatibility impacts would be considered significant.

Impact
4.1-5

Land Use Compatibility - Parks and Residential Uses. The Specific Plan proposes development of a 20-acre community park (no sports field lighting is proposed). The park would serve residents of the Plan Area as well as the surrounding community. Existing residential uses are located generally to the south of the proposed park site. New residential uses are also proposed to the north, east and west of the park site. Noise generated by park users could create nuisances for adjacent residential areas. Also, easier access to adjacent residential areas could increase the potential for vandalism. Because residential uses are considered sensitive receptors for noise, and there is an increased potential for vandalism, the location of parks and residential land uses adjacent to each other may result in land use conflicts. This impact is considered potentially significant.

General Plan, Figure II-5, “Neighborhood, Community, and Regional Parks,” identifies a future 20-acre community park within the Plan Area. Accordingly, the Specific Plan identifies Lot 14 for development as a community park consistent with the General Plan and Land Use Policy 8 (Community Facilities) and Program 8.2. A community park serves the entire community and may generally include parking areas, restrooms, facilities for community activities, leisure areas, sports fields, tennis courts, or a swimming pool. The actual uses and activities for the park have not been determined. However, because a community park serves a broad population area (i.e., larger than a neighborhood) noise will be generated by park users and traffic coming to and from the park. Because residential uses are considered sensitive receptors for noise, the noise levels generated by park users could be considered a nuisance. Also, with development of Lot 14 as a park, easier access would potentially be provided to the existing and proposed residential uses. Increasing access to the residential areas could increase the potential for vandalism. Lighting of play fields is not proposed, so significant light and glare sources would not result.

A park is generally considered a community amenity. Provision of a park within the Plan Area is consistent with General Plan Land Use Policy 8. However, proximity of a park to residential areas could result in land use conflicts as described above. These impacts would be considered potentially significant.

Land Use Compatibility - Schools and Residential Uses. The Specific Plan proposes the development of a 12-acre elementary school adjacent to proposed residential uses. Noise generated by school uses, increased traffic at the beginning and end of the school day and vehicles parking in the adjacent residential areas either during the day or during special events at the school could create nuisances for adjacent residential areas. However, the Pleasanton Unified School District would need to conduct a detailed school parking needs study prior to approval of a school development plan. The school development plan should provide adequate on-site parking to accommodate all school event parking needs. No significant land use compatibility impacts would be anticipated.

The Specific Plan proposes the development of a 12-acre elementary school that is intended to serve the needs of the Plan Area children and the outlying residential areas to the east and west. The school is proposed to be located in the north-central portion of the Plan Area on Lots 18 and 19. Both of these lots are also proposed to include areas of medium-density residential that would be located directly adjacent to the school. Potential land use conflicts between the residential areas and the school would include noise from school bells and children playing outside, increased traffic at the beginning and end of each school day associated with parents dropping off and picking up elementary school students, and possibly parking in the adjacent residential areas during special events at the school. Some residents could consider these impacts a nuisance. However, the location of schools adjacent to residential areas is common throughout California. The noise levels typically generated from an elementary school, because they occur primarily during the day and are limited to when children are playing outside, would not generally be considered an adverse effect. The increased traffic associated with parents dropping off and picking up elementary school students would be concentrated at the school entrance along Vineyard Avenue. Because right turn lanes and left turn pockets would be provided on Vineyard Avenue at the school entrance following its realignment, the increase in traffic during the morning and afternoon would generally not disrupt traffic flows on Vineyard Avenue. Also, traffic generated by parents picking up students in the afternoon (2:30 pm to 3:30 pm) would not affect the peak hour commute traffic that occurs in the evening (4:30 pm to 6:30 pm).

Parking in adjacent residential neighborhoods could be a nuisance for residents during special events at the school when both teachers and parents need to use parking spaces. However, the Pleasanton Unified School District would need to conduct a detailed school parking needs study prior to its approval of a school development plan. The school development plan should provide adequate on-site parking to accommodate all school event parking needs. Because school activities would not generally disrupt residential land uses, no significant land use compatibility impacts would be anticipated between the proposed school and residences.

Land Use Compatibility - Aggregate Mining and Residential Uses. The Plan Area is located adjacent to the Arroyo del Valle, an area which is subject to extensive aggregate mining and processing. In addition, Lot 21 within the Plan Area is owned by RMC Lonestar. Alameda County issued a mining and reclamation permit to RMC Lonestar in 1981 that allows aggregate mining on approximately 2 acres of the northeastern portion of Lot 21 as part of the Livermore Amador Valley Quarry Reclamation Specific Plan.

Conflicts could occur between the proposed residential uses and existing aggregate operations. Further, proposed residential uses could be affected by future mining and reclamation operations occurring on Lot 21. This impact would be considered significant and unavoidable.

Areas north of the project site adjacent to the Arroyo del Valle have been subject to extensive aggregate mining and processing operations for several decades. These operations produce noise, dust and vibrations that could potentially affect development within the Plan Area. Because residential and school uses are considered sensitive receptors, future land use incompatibilities could result from placement of these uses near existing and proposed mining and processing operations.

Lot 21, located in the northeastern corner of the Plan Area, is permitted by Alameda County for aggregate mining. This lot is owned by RMC Lonestar, the operator of mining and processing activities in the Arroyo del Valle. RMC Lonestar has not made a decision with regard to the extend of mining on this parcel, however, this Specific Plan assumes that any mining which might occur would be limited to approximately 10 acres located north of the proposed Vineyard Avenue realignment. These activities could adversely affect residential development proposed on the southern half of this lot, as well as on other nearby lots.

Primary impacts resulting from mining activities involve noise, dust generation, and public health and safety. These issues are discussed in Section 4.5, Noise, Section 4.6, Air Quality, and Section 4.9, Public Health and Safety. Based on the conclusions included in these sections, the land use compatibility impacts between future agricultural operations on Lot 21 and future residential uses would be considered significant and unavoidable.

Impact
4.1-8

General Plan Consistency - Areas of Special Interest. Development of the Plan Area would be required to comply with the Areas of Special Interest requirements identified in the General Plan. Creation of a specific plan for the project site is in keeping with these requirements. Additional standards have been incorporated into the Specific Plan to address the issues relative to the Vineyard Avenue Corridor. Compliance would be required for all development in the Plan Area. No significant impacts would be anticipated.

The Plan Area is identified in the Pleasanton General Plan as an “Area of Special Interest,” necessitating a specific plan to address the complexity of planning issues raised by the Vineyard Corridor. In keeping with this designation, a specific plan has been prepared for the proposed project.

None of the existing residences currently located within the Plan Area would be displaced except for the mobile home provided for the landfill caretaker on Lot 14. The physical arrangement of the community would not be disrupted in association with implementation of the proposed Specific Plan.

The General Plan also identifies a 20-acre community park within the Vineyard Corridor area (Figure II-6, p. II-30). A 20-acre community park is proposed within the Plan Area on Lot 14 consistent with the specifications of the General Plan. The park and other proposed land uses within the Plan Area would not conflict with any established recreation, educational, religious, or scientific uses of the area.

Portions of the Plan Area to the north and south are bordered by the UGB. According to the General Plan Land Use Element, “Lower densities should be encouraged along the inside edge of the Urban Growth Boundary to provide a transition/buffer for preventing potential conflicts with uses immediately beyond the boundary” The Specific Plan proposes semi-rural housing, open space, viticulture and elementary school play fields adjacent to the UGB, consistent with the directives of Land Use Policy 11 (Open Space) and Program 11:4.

The Plan Area is partially surrounded by residential development to the south, west and east and currently includes 19 residences. As such, the proposed project is consistent with Land Use Policy 2 (Overall Community Development-Residential). The overall density of the project and the preservation of agriculture and open space areas through the use of PUD-V and PUD-OS zoning designations is consistent with Land Use Program 2.1 (Overall Community Development) and Policy 10 (Open Space) and Program 10.1. The project’s inclusion of an elementary school site and community park site is consistent with Land Use Policies 8 and 9 (Community Facilities). The number of units proposed in the development would not cause the City to exceed the maximum housing buildout of 29,000 units within the General Plan Planning Area consistent with Land Use Policy 15 (Growth Management). Furthermore, because the Plan Area is adjacent to the urban edge of the City, it can be efficiently served by public facilities and infrastructure (discussed further in Section 4.8, Public Services). This is consistent with Land Use Policy 17 (Growth Management) which encourages development in areas where public facilities are planned.

4.1.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.1-4
mitigation

Land Use Compatibility - Residential with Agricultural Land Uses

The Specific Plan requires that urban uses be separated from existing and proposed agricultural operations through buffers such as streets or passive open space.

Purchasers and renters of property are required to sign a statement to be included in their deed of sale or rental/lease agreement to protect agricultural uses from nuisance lawsuits. The statement shall read as follows:

“You are hereby advised that this property is located near land zoned and/or used for agricultural purposes. Agricultural use is defined as including but not limited to day and night time activity relating to livestock grazing, the keeping of livestock, the growing and processing of agricultural crops, and any commercial agricultural practices performed as incidental to or in conjunction with such operations. Some of the impacts associated with agricultural use include but are not limited to noise, odors, dust, chemicals, refuse, waste, unsightliness, use of agricultural equipment, and traffic. Permitted agricultural pursuits conducted in accordance with good practice and maintenance are not deemed by the City of Pleasanton to be a nuisance.”

Site-specific vineyard and open space management plans shall be prepared and submitted by each developer of lots which contain vineyard land as a part of the PUD development plan application. Plans shall address agricultural operations and wildlife and vegetation preservation needs.

Vineyard planting (at least root-stock) and permanent irrigation facilities shall be completed prior to the issuance of building permits for the last 50% of dwellings to be constructed on the original lot on which the vineyards are located.

Additional measures are included in Chapter 4 of this report to mitigate land use compatibility impacts between agricultural operations and residential uses, including noise, dust generation, and fertilizer/pesticide use.

impact
4.1-5
mitigation

Land Use Compatibility - Parks and Residential Uses

Uses in the southern most portion of the proposed park shall generally be restricted to passive activities such as pedestrian/equestrian trails and open space. Setbacks and landscaped buffers of at least 30-feet shall be incorporated into the park site plan to screen existing and proposed adjacent residential areas from park noise and activities. Outdoor security lighting shall be shielded to direct light downward to minimize its visibility from surrounding properties.

impact
4.1-7
mitigation

Land Use Compatibility - Aggregate Mining and Residential Uses

Implement the Specific Plan measures identified in Section 4.5, Noise, and Section 4.6, Air Quality.

4.1.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures are available for the land use compatibility impacts anticipated between potential future aggregate mining operations on Lot 21 and future residential uses.

4.1.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The land use compatibility impact between future aggregate mining operations on Lot 21 and adjacent future residential uses would remain significant and unavoidable following implementation of the identified Specific Plan measures. All other land use impacts would be reduced to less-than-significant levels.

4.2 EARTH RESOURCES

4.2.1 EXISTING CONDITIONS

GEOLOGY

The project site is located within the Coast Range Geomorphic Province of California. This regional subdivision of California's diverse geologic environment is characterized by northwest-southeast trending low mountain ranges and intervening valleys. This regional geomorphology is controlled by active tectonics and related geologic structures, including large-scale folds and faults. The typical regional structural trend is expressed at the project site.

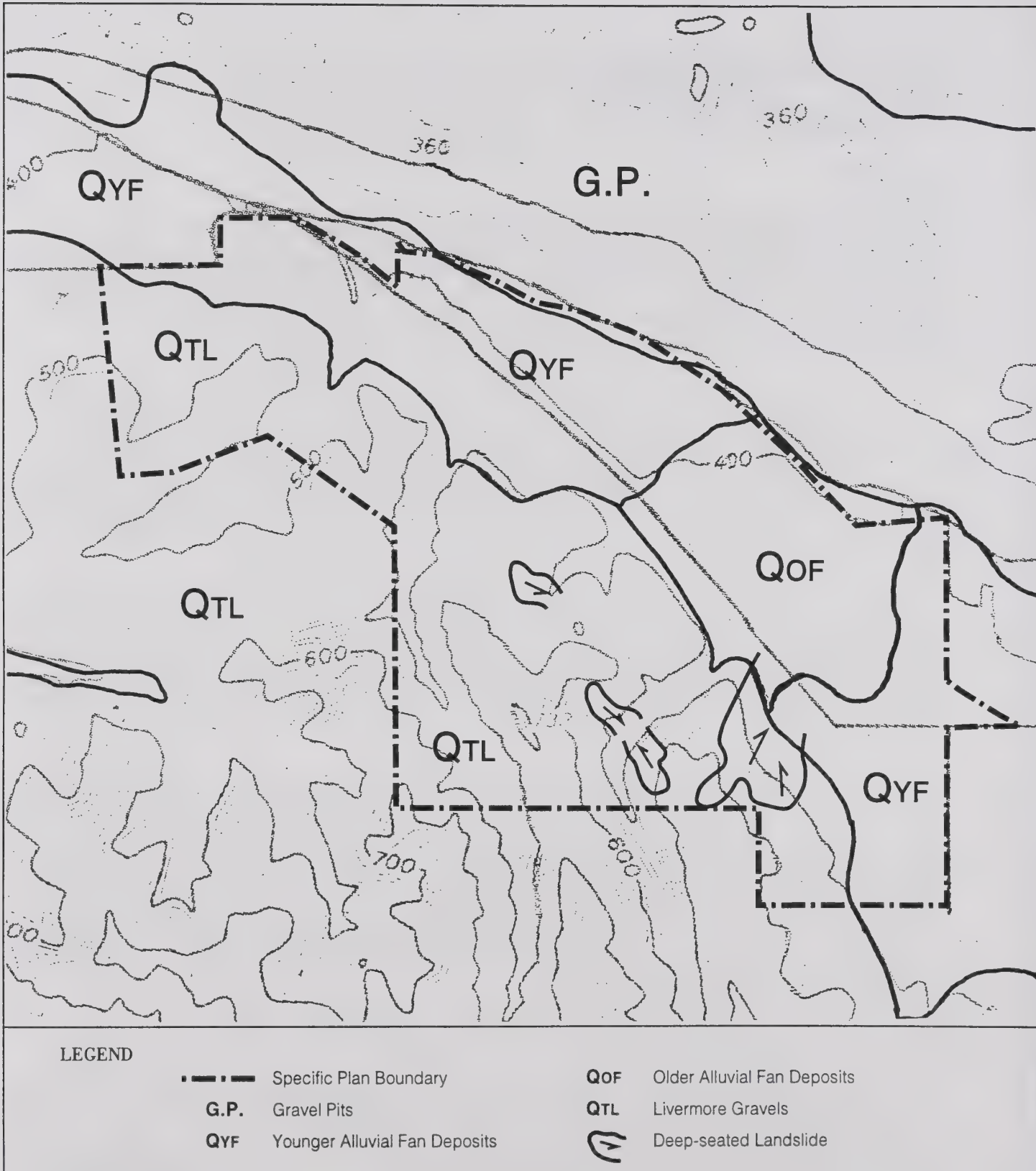
Two distinct geomorphic regimes characterize the topography of the project site. The northern portion of the site occupies the relatively flat alluvial terraces along the south side of Arroyo del Valle, the regional westward flowing stream in the central portion of the Livermore Valley. The southern and western portions of the site are located within an upland area that consists of moderately-steep to steep hills with narrow drainages. The slopes on the flanks of the uplands range up to a slope of 2:1 (horizontal:vertical ratio).

The geology of the project site is identified on Exhibit 4.2-1. The alluvial terrace north of Vineyard Avenue is underlain by alluvium, or sediments deposited by running water, which is composed of unconsolidated and interbedded sand, silt, gravel, and clay deposits. These unconsolidated sediments were deposited during the Holocene and/or Pleistocene epoch of the Quaternary Period (within the last two million years). The surface of the terrace slopes gently toward the Arroyo del Valle, and is approximately 20 to 60 feet above the active channel of the arroyo.

The uplands area is underlain by the Livermore Gravels, alluvial deposits that were deposited in the Pliocene (five to two million years ago) and Pleistocene Epochs. These older alluvial deposits are uplifted along the northern margin of the Diablo Range. Geologic mapping within the project site indicates that the alluvial deposits dip (slope) gently (8 to 10 degrees) to the north-northeast. The upland slopes developed on the Livermore Gravels are mantled by variable thickness of unconsolidated hillslope deposits (colluvium). The colluvium is generally thicker in the lower portions of the slopes and in depressions (colluvial hollows or swales) that usually represent the uppermost portions of the drainage systems developed on the slopes.

SOILS

Soil is generally defined as the unconsolidated mixture of mineral grains and organic material that mantles the land surfaces of the earth. Soils can develop on unconsolidated sediments and weathered bedrock. The characteristics of soil reflect the five major influences on their development topography, climate, biological activity, parent (source) material, and time. Three general soil types and seven distinct mapping units have been identified (Exhibit 4.2-2) at the project site by the Soil Conservation Service. The soil mapping units at the project site and their characteristics are summarized in Table 4.2-1.



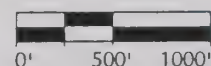
Source: Berlogar, 1992.

Site Geology

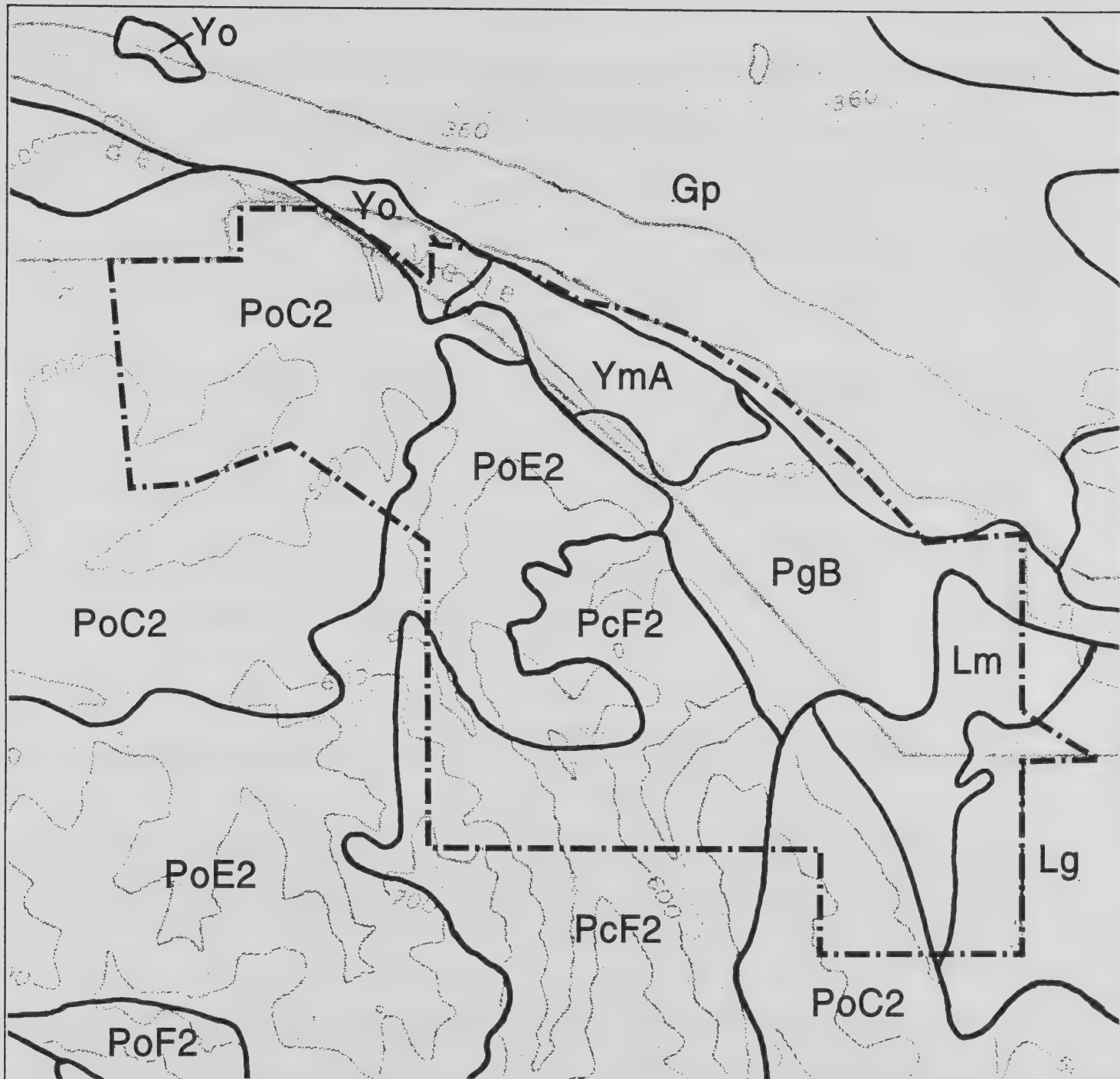
EXHIBIT 4.2-1

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 6/98



EDAW



LEGEND

--- Specific Plan Boundary

Lg Livermore gravelly loam

Lm Livermore very gravelly loam

PcF2 Perkins loam

PgB Pleasanton gravelly loam

PoC2 Positas gravelly loam (2-20% slope)

PoE2 Positas gravelly loam (20-40% slope)

PoF2 Positas gravelly loam (40-60% slope)

Rh Riverwash

YmA Yolo loam

Yo Yolo loam over gravel

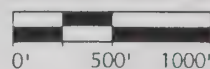
Source: Baseline Environmental, 1998.

Soil Map

EXHIBIT 4.2-2

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 6/98



EDAW

**Table 4.2-1
Soil Types at Project Site and Vicinity**

Symbol	Mapping Unit	Slope	Permeability	Shrink-Swell	Erosion Hazard	Capability Class
Lg	Livermore gravelly loam	0-7%	rapid	low	slight	Iis-4
Lm	Livermore v. gravelly loam	0-7%	rapid	low	slight	IVs-4
PcF2	Perkins loam	45-75%	moderately slow	moderate	very severe	VIIe-3
PgB	Pleasanton gravelly loam	3-12%	very slow	low to moderate	slight to moderate	IIIe-3
PoC2	Positas gravelly loam	2-20%	slow to moderate	low to high	slight to moderate	Ive-3
PoE2	Positas gravelly loam	20-40%	slow to moderate	low to high	severe	VIe-3
YmA	Yolo loam	0-3%	moderate	low	slight	I-1

Source: USDA, Soil Survey of Alameda Area, California, 1966.

Topography and parent material are the strongest influence on the distribution of soil mapping units at the project site. The ridges and associated sideslopes are mantled with Perkins loam and Positas gravelly loam that are developed on the Livermore Gravels. Generally, these soils were developed on moderate to steep slopes, have a moderate to severe erosion potential and are moderately to severely limited in their suitability for agriculture.

The valley bottom soils are identified as Livermore gravelly loam and very gravelly loam, Pleasanton gravelly loam, and Yolo loam (including loam over gravel). These soils have formed on the more recent alluvial deposits. The shrink-swell potential for these soils is generally low and the erosion potential is slight to moderate. The agricultural Capability Class for these soils range from Class I-1 (few limitations) for the Yolo loam to Class IIIe-3 (potential erosion problems and clayey subsoil) for the Pleasanton gravelly loam. These soils are suitable for profitable viticultural production.

Slope Stability

The slope stability conditions at the project site are primarily controlled by the steepness of the slopes and the geologic materials. The upland areas in the southern portion of the project site include areas of relatively steep (up to 2:1 or 45%) slopes. Portions of the upland areas at the site south of Vineyard Avenue are susceptible to slope failures. The gentle to moderate ridgetops are susceptible to

landsliding. However, these areas would be expected to remain relatively stable unless radical changes in slope stability were to occur on adjacent areas. The moderately-steep to steep sideslopes of the ridges are characterized as very susceptible to slope failure. Numerous (over 90) small to moderate size landslides have been mapped on these slopes at the project site. The majority of these slope failures are shallow (5 to 15 feet thick) rotational failures, generally affecting only the colluvium and weathered bedrock. However, four of the slope failures have been identified as deep-seated active rotational landslides (Exhibit 4.2-1). The soil and colluvium on the slopes are also susceptible to soil creep. Soil creep is the slow downslope movement of expansive soils induced by repetitive cycles of wetting (expansion) and drying (contraction or shrinkage) under the influence of gravity.

In addition to the slopes of the upland area, the steep southern margin (bank) of Arroyo del Valle at the northern boundary of the project site is susceptible to slope failure. The stream bank is a relatively high (30 to 50 feet) and steep (up to 0.5:1) slope developed on unconsolidated alluvial sediments. This slope is susceptible to shallow rotational failures. The possibility for erosion of the toe of the slope (undercutting) during high flow events in the arroyo exacerbates the potential for such failures.

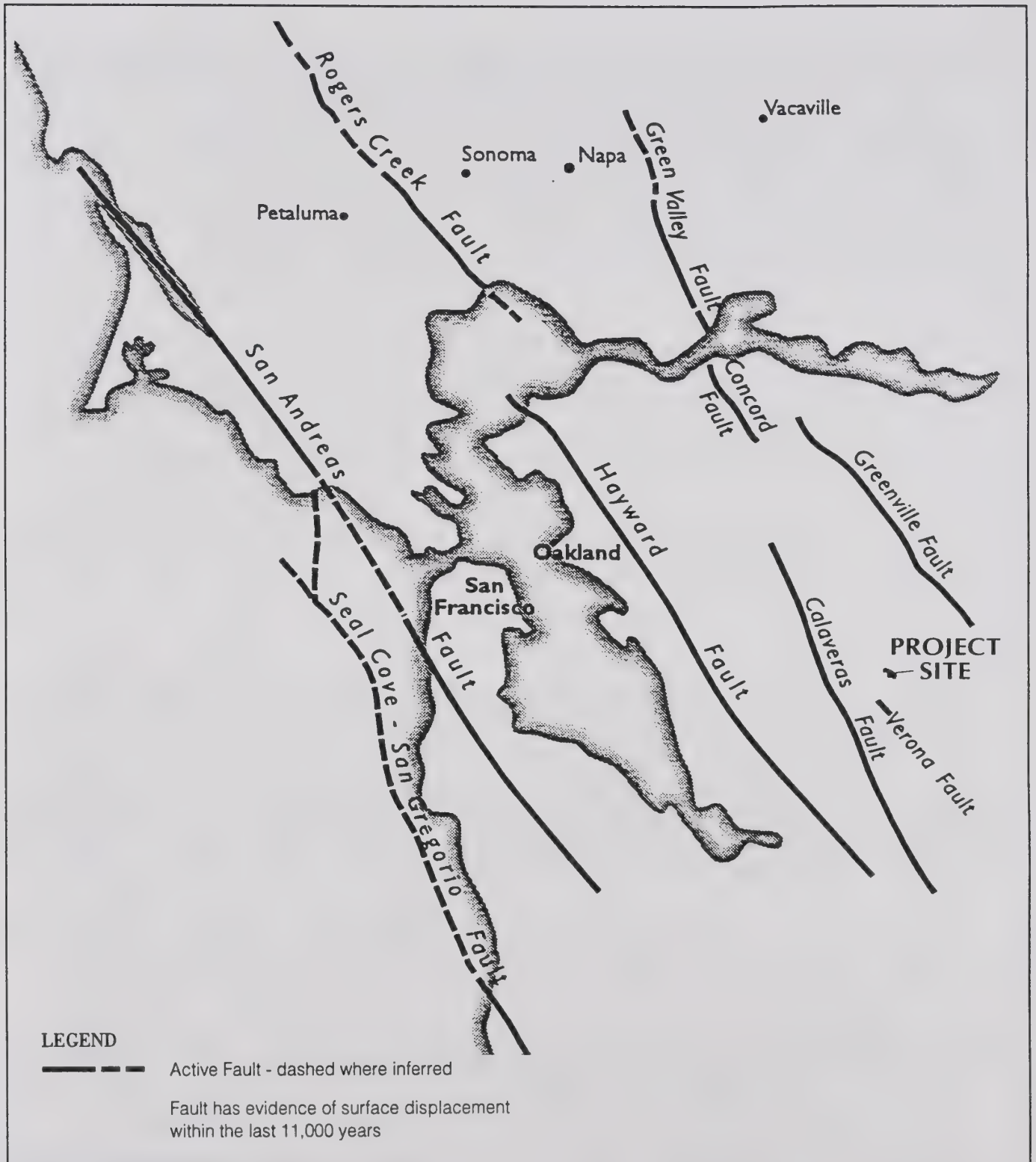
The northern portion of the site is dominated by the relatively flat topography of the valley floor. This area slopes to the north at approximately 1% to 3%. This portion of the project site would be expected to present a negligible potential for slope instability.

Seismicity

The project site is located in the seismically active San Francisco Bay Region. The region is within the San Andreas Fault System (SAFS) that has developed along the boundary between the Pacific and North American lithospheric plates. Relative motion along this plate boundary causes the accumulation of strain within the earth's crust. The sudden release of this strain generates earthquakes. Numerous seismic sources within the SAFS (Exhibit 4.2-3), including the San Andreas, Hayward, Rodgers Creek, Calaveras, and Greenville faults are capable of generating moderate to large earthquakes. In general, the prominent fault zones within the SAFS are steeply-dipping to vertical, right-lateral, strike-slip faults.

The site would not be expected to experience fault rupture because no known active, or identified faults of any kind, traverse the site. However, the project would be subject to moderate to strong ground shaking on nearby and regional faults.

The closest active fault to the site is the Verona fault, located approximately 2 miles to the southwest. California Division of Mines and Geology (CDMG) considers this fault active and an Alquist-Priolo Earthquake Fault Zone Map has been established for the fault. The northwest-southeast trending fault is approximately 5 miles long and is considered capable of generating a moment magnitude (Mw) 6.2 earthquake. The next closest active fault, the Las Positas fault, is located approximately 2.7 miles southeast of the project site. The Las Positas fault is estimated to be capable of generating a Mw 6.3 earthquake.



Source: CDMG Special Publication 78.

Regional Faults

EXHIBIT 4.2-3

The project site could also be affected by moderate to large earthquakes generated by several major active faults within the San Andreas Fault System, including the Greenville, San Andreas, Hayward, Rodgers Creek, and Calaveras. Recent regional seismic hazards evaluations have been conducted to determine probabilistic estimates for seismic shaking levels throughout California. The expected peak horizontal acceleration (with a 10% chance of being exceeded in the next 50 years) generated by any of the seismic sources potentially affecting the area including the project site is estimated by the Federal Emergency Management Agency to be between 40 and 60% of gravity (0.4 to 0.6g). The California Division of Mines and Geology estimate this peak acceleration to be greater than 0.6g.

Secondary effects of seismic ground shaking that may represent potential impacts to on-site development include liquefaction, landslide activation, differential compaction, and lurching cracking. During moderate to strong ground shaking, saturated sediments can undergo a type of failure referred to as liquefaction. During liquefaction, elevated pore water pressures cause a complete and sudden loss of strength and the sediments are transformed from a solid to liquid state. In a liquid state, the sediments have no bearing capacity and can flow. The results of flow can include collapse or settlement of the ground surface. Significant damage or collapse of structures build in areas affected by liquefaction can occur.

Within a region of expected strong seismic shaking, Holocene alluvial deposits such as those found in the northern portion of the site have a relatively high potential for liquefaction. Older alluvial deposits, such as the Livermore Gravels that underlie the upland area in the southern portion of the site, generally have low liquefaction potential.

Mineral Resources

The Specific Plan area lies within a sand and gravel mining area referred to as the Livermore-Amador Valley Production District (LAVPD), one of several districts within the South San Francisco Bay Production-Consumption Region (SSFBR-CR). The sand and gravel deposits of the Quaternary alluvium within the valley are recognized as an important source of aggregate for the production of Portland cement concrete (PCC). Aggregate mining has occurred in the valley since the late 1800s. As required by the Surface Mining and Reclamation Act of 1975 (SMARA), CDMG has mapped and classified the available resources within this mining district and has developed projections for production and consumption within the region served by mining and processing facilities within the valley. CDMG has classified the northern portion of the project site adjacent to Arroyo del Valle as a Mineral Resource Zone - 3 (MRZ-3), an area containing known mineral resources that are not known sufficiently well to determine their significance. The areas classified as MRZ-3 include both Quaternary alluvium and the Livermore gravels. The northeasternmost corner (approximately two acres) of the site was classified as an MRZ-2 and designated as being within an aggregate resource sector (Sector A-2). Portions of this sector have been extensively mined and are designated as a resource of "statewide significance." The designated two-acre area of the project site is bounded by previously mined areas along Arroyo del Valle. A permit to mine this area was granted by Alameda County as part of the 1981 Specific Plan for Livermore-Amador Valley Quarry Reclamation.

Relevant General Plan Policies and Programs

The following earth resource policies and programs included within the General Plan Public Safety Element are applicable to the proposed project.

- Policy 2: Investigate the potential for seismic hazards during the development review process, and implement soil engineering and construction standards which minimize potential danger from earthquakes.
- Policy 5: Investigate the potential for geologic hazards as part of the development review process, and maintain this information for the public record.
- Policy 6: Restrict new development of sites with structures intended for human occupancy in any landslide prone area and indicated as “Moderate” through “High” hazard for any geologic zone.
- Program 8.2 Require new development to pay for fire safety improvement needs generated by the new development.

4.2.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Exposure of people or structures to major geologic hazards would be considered significant effects under CEQA Guidelines. For purposes of this EIR, strong seismic shaking, potential fault rupture, landsliding, and adverse soil conditions are considered significant impacts. An additional significant effect would be the loss of availability of a mineral resource of substantial value to the region.

SPECIFIC PLAN GUIDELINES

The following Specific Plan guidelines have been developed for grading activities on the site.

1. Grading for buildings, driveways, outdoor-use areas, etc., should be compatible with existing topographic contours and minimized to preserve the natural topography of the site.
2. Graded slopes should utilize “rounded landform grading” techniques to achieve a natural transition between graded areas and existing terrain. Flat graded planes and sharp angles of intersection should be avoided to reduce the visual impact of grading.
3. Site grading should be used to screen uses and buildings and reduce the visual mass of buildings, wherever applicable.
4. Substantial graded areas of uniform slope in hillside areas should be avoided. Cut and fill slopes should generally undulate and vary in slope gradient.

5. Tennis courts should not be permitted on existing slopes which exceed seven percent.
6. Cut slopes should generally occur behind buildings where they will be screened from fronting street views.
7. Graded slopes should maintain a maximum slope of 3:1.
8. The height of retaining walls should generally not exceed five feet. The use of parallel retaining walls with landscaping between them may be necessary in order to minimize large cut slopes.
9. Existing areas that have been scarred by previous grading should be recontoured to a natural land form appearance, whenever feasible.
10. Existing native trees should be preserved whenever possible. Grading under tree driplines (including trenching for utilities) should be avoided whenever possible. All development shall conform to the City's Heritage Tree Ordinance.
11. Drainage patterns around existing trees should generally remain undisturbed in order to ensure preservation of the trees.

In addition, the Specific Plan includes measures that are intended to reduce the impacts associated with development to less-than-significant levels. These measures are included at the end of this section.

PROJECT IMPACTS

Impact
4.2-1

Site Seismicity. Ground shaking during expected earthquakes on regional faults could cause structural and nonstructural damage at the project site. This would be considered a significant and unavoidable impact.

Although the damage by seismic shaking to structures built in compliance with the UBC requirements for seismic design would not likely cause collapse of the structures, the damage could require significant repairs. In addition to potential structural damage, nonstructural damage would be expected. Nonstructural damage could include breakage of windows, doors, piping, ducts, and light fixtures, collapse of walls, partitions, ceilings, and stairways, or damage to contents (appliances, computer equipment, and furnishings). Damage to nonstructural elements can account for the majority of a building's replacement cost following a major earthquake.

During moderate to strong ground shaking, saturated unconsolidated sediments can undergo a type of failure referred to as liquefaction. During liquefaction, elevated pore water pressures cause a complete and sudden loss of strength and the sediments are transformed from a solid to liquid state. In a liquid state, the sediments have no bearing capacity and can flow. The results of flow can include collapse or settlement of the ground surface. Significant damage or collapse of structures built in areas affected by liquefaction can occur.

At the project site, the alluvial deposits within Vineyard Corridor are recognized in the City's General Plan as having a high susceptibility to seismic shaking and "Moderate to High" and "High" potential for liquefaction. Associated impacts including lateral spreading, differential settlement, and lurch cracking are also "Moderate to High" and "High." These impacts could result in substantial damage to building foundations or other site improvements. Because the potential for damage during strong seismic shaking cannot be entirely eliminated, these impacts would be considered significant and unavoidable. A similar potential for seismically-induced damage affects most areas within the San Francisco Bay region that are located near major active faults.

Impact
4.2-2

Slope Instability. Construction of buildings or site improvements within or adjacent to landslides or slopes prone to landsliding could result in damage during new or continued slope movement. This impact would be considered potentially significant.

The steep slopes of the upland areas of the project site present the potential for landsliding that could adversely affect development within these areas. The slope failures that have been identified at the project site are predominantly shallow rotational landslides and debris flows. However, four of the slope failures have been identified as "deep-seated" rotational slides. These types of slides develop along failure planes within the bedrock and involve a deeper, typically larger earth mass. Although the landslide may move downslope as a relatively coherent block at the time of failure, the mass is usually unstable and smaller slope failure may develop within the mass.

Under the proposed project, most of the areas affected by slope stability problems would not be developed, avoiding significant impacts related to landsliding. However, the proposed project does propose limited low density residential development on or near relatively steep slopes within the project site. Homesites and related improvement (e.g. roads, utilities, pools, and landscaping) could be affected by development of new landslides or reactivation of movement on existing landslides. This would be considered a potentially significant impact.

In addition to the steep upland areas of the southern portion of the site, the northeastern margin of the site along Arroyo del Valle includes the steep to very steep south bank of the arroyo. This slope is developed on unconsolidated alluvial deposits and is unstable. Active slumping and erosion of the bank is evidence of the instability of this slope. Improvements located adjacent to this area may be damaged by slope failures along the bank. In general, the land use along the northeastern margin of the proposed project site adjacent to the arroyo bank would be vineyards and the realigned Vineyard Avenue. Therefore, damage to building structures would not be expected in this area.

Impact
4.2-3

Unstable Deep Fills. The proposed construction of deep fills at the project site could result in the development of adverse soil conditions that could cause deformation of the fills. This deformation could affect the performance of foundations and other site improvements, including roadways and utility lines. This impact would be considered potentially significant.

Although the fills at the project site would be designed and constructed under the requirements of an approved grading plan, the potential for settlement of the fills and related subsidence of the land surface may occur in localized areas of the project site. Minor settlement of properly constructed deep fills may be caused by primary compression that would typically occur soon after construction. However, over the last 10 years, investigation of settlement of old deep fills has raised a concern amongst geotechnical professionals regarding the long-term performance of these features. Older deep fills appear to be susceptible to a phenomenon typically referred to as hydrocompression. Under this process, the water content in soils within the deeper portions of the fills increases through time and, ultimately, the soil becomes saturated. The source of water has been attributed to overwatering of landscaped areas, leaking water conveyance structures, and collection of groundwater. When these deeper portions of the fill become saturated, the compacted soil can lose strength and experience consolidation. In many cases this process will not occur until more than ten years after construction of the fill. This delayed consolidation can result in significant settlement of the ground surface. Such settlement can cause damage to improvements (structures, utilities, and pavements) that are constructed on the fills. This impact would be considered potentially significant.

Impact
4.2-4

Expansive Soil. The potential for expansive soils on the site to shrink and swell dependent upon weather conditions could cause damage to structures. The soils throughout the project site exhibit the adverse condition of a moderate to high shrink-swell potential. This condition can cause deformation and damage to structures built on these soils. This impact would be considered potentially significant.

Soils underlying portions of the project site have moderate to high shrink/swell potential. This condition occurs when expansive soils undergo alternate cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes significantly. Structural damage, warping, and cracking of roads and sidewalks, and rupture of utility lines may occur if the potential for expansive soils is not considered during design and construction of improvements. On moderate to steep slopes, the shrink-swell potential of these soils can exacerbate a process known as “soil creep.” Under soil creep, the surface soil mantling the slope moves downslope very slowly. Although the movement is slow, structures on and within the soil can deform in response to the movement, resulting in tilted fences, cracked pavement or building foundations. This impact would be considered potentially significant.

Impact
4.2-5

Compatibility with Mineral Resources. The development of areas of the project site designated as (aggregate) Resource Sector A-2 by the CDMG could result in a land use that is incompatible with the extraction of identified aggregate resources. The potential development area is relatively isolated in relation to regional resources and is not identified as an important sand and gravel harvesting area in the General Plan. This impact would be considered a less-than-significant impact.

The development of residential uses and vineyards in the area of the project site north of Vineyard Avenue in the eastern portion of the site would overlie sand and gravel deposits that are suitable for use as aggregate in the production of Portland Concrete Cement (PCC). Due to the value of these materials for this use, CDMG has mapped and classified the aggregate resources of the Amador-Livermore

Valley, including the area of the site. Most of the northern portion of the site is classified as Mineral Resource Zone 3 (MRZ-3), an area of mineral resources. Approximately two acres of the northeast portion of the RMC Lonestar property at the eastern margin of the site has been identified as an aggregate resource sector and an “area of regional significance.” SMARA requires that such designated resources be conserved and protected by the local permitting agency.

Conservation and protection is generally interpreted to mean development and implementation of mineral resource management policies that restrict land uses that would be incompatible with the extraction of aggregate resources. Policy 7 of the Conservation and Open Space Element of the City’s General Plan proposes to “reserve all areas designated on the General Plan Map as Sand and Gravel Harvesting exclusively for the production of this resource.” However, no areas of the project site are identified for this use.

The project proposes vineyards in the eastern portion of the project site. The State Mining and Geology Board Reclamation Regulations identify agriculture as a use compatible with the protection and conservation of aggregate resources. Vineyards are proposed in the northeast corner of the RMC Lonestar property that is designated as an “area of regional significance.” Therefore, the proposed vineyard area of the RMC Lonestar property would be generally consistent with the regulations requiring protection of the “designated” mineral resources.

Alameda County issued a mining and reclamation permit to RMC Lonestar in 1981 that allows aggregate mining on approximately two acres of the northeastern portion of Lot 21. The remainder of the site is within the Quarry Area identified in the 1981 Specific Plan for the Livermore-Amador Valley Quarry Reclamation but is not proposed for mining and reclamation. The reclamation plan specifies that at the completion of mining, the mined area would be reclaimed as part of a 147-acre lake (Lake B) that would extend eastward and northward of the project site. After reclamation, the lake would be dedicated to and maintained by Zone 7 of the Alameda County Flood Control and Water Conservation District (Zone 7) as part of the “chain of lakes” development proposed by the 1981 Specific Plan. The reclamation plan also indicates that by the year 2030, the Arroyo del Valle would be rerouted from its current location to a position around the southwestern edge of the permitted mining area of the RMC Lonestar property. The proposed project would not conflict with any of the approved uses and no significant impacts would be anticipated.

4.2.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.2-1
mitigation

Site Seismicity. All structures and constructed slopes shall be designed in accordance with the most recent Uniform Building Code as modified by the California Code of Regulations. A soils and geotechnical report shall be prepared for each individual development (unless otherwise approved by the City Engineer) within the Specific Plan Area. Analysis presented in the geotechnical report shall conform with the California Division of Mines and Geology recommendations presented in

the “Guidelines for Evaluating Seismic Hazards in California.” Projects located within the alluvial deposit areas of the project site shall specifically address and be designed to withstand the potential for liquefaction. Projects within the upland areas or adjacent to steep slopes of upland areas shall specifically address the potential for seismically-induced landsliding. The report shall be submitted to the City for review by a qualified consulting geotechnical engineer reporting to the City at the applicant’s cost. The project shall incorporate all recommendations of the City’s consulting engineer into the project design.

impact
4.2-2
mitigation

Slope Instability. For areas with slopes steeper than 20% or within or adjacent to existing landslides, a slope stability analysis report (addressing static and pseudo-static conditions) shall be prepared by a licensed Civil Engineer and include the appropriate recommendations from the approved geotechnical report for any proposed residential development or roadway construction. The report shall provide recommendations for control of surface drainage, adequate groundwater drainage, and slide mass removal or stabilization, if necessary. The analysis shall be supported by investigation of site-specific conditions that shall include, but not be limited to:

- ▶ estimated recency of slope failures and potential for continued movement;
- ▶ depth of landslides or colluvial deposits and characterization of slide plane(s);
- ▶ shear strength data for subsurface materials at the project site;
- ▶ location of springs;
- ▶ groundwater level data that characterizes seasonal fluctuations; and
- ▶ justification of seismic coefficient used in pseudo-static analysis.

Proposed cut and fill slope designs shall have factors of safety not lower than 1.5 under static conditions and 1.0 under seismic shaking conditions.

Prior to the final design of the relocated Vineyard Avenue, the stability of the slopes of the south bank of Arroyo del Valle generally within 200 feet of the proposed location of the roadway shall be evaluated by a qualified geotechnical engineer to determine if slope failures could affect the short- and long-term integrity of the constructed roadway or if construction or operation of the roadway could affect the stability of the banks. A geotechnical report shall be prepared for the City that specifies appropriate slope design and construction. Recommendations within the report shall be implemented in the roadway specifications.

impact
4.2-3
mitigation

Unstable Deep Fills. All grading plans, cut and fill slopes, compaction procedures, and retaining structures shall be designed by a licensed geotechnical or civil engineer. All grading and slope preparation activities shall be conducted under the supervision of a licensed geotechnical engineer or certified engineering geologist.

To the extent possible, grading plans shall minimize earthmoving and site grading. Development design shall avoid placing structures and utilities on or near the tops of slopes or in the shallow subsurface of slopes.

In graded construction areas, replacement vegetation shall be planted as quickly as possible. Graded areas that remain inactive for 10 days or more during the rainy season (October 1 to April 1) without permanent replanting should be hydroseeded or stabilized to inhibit dust generation.

The final geotechnical report for the grading plan for proposed projects shall be prepared by a professional engineer and approved by the City Engineer. The report shall address the potential for delayed (differential settlement) consolidation within deep fills and associated land surface subsidence. The report shall provide specific recommendations for:

- ▶ Fill compaction specifications that consider the likelihood of eventual saturation and wetting and drying cycles for the fill materials;
- ▶ Removal of colluvial material or weathered rock that may be subject to consolidation under the load of proposed fills;
- ▶ Design that minimizes the variability of fill thickness within fills that underlie structures or other improvements at the project site; and
- ▶ Design and operation of adequate subsurface drainage systems for fills (particularly beneath heavily irrigated areas or other water sources such as swimming pools or detention basins). Drainage systems for the fills shall be designed to minimize maintenance and ensure long-term performance. Flow from the drainage system shall be controlled so as not to cause or contribute to erosion of existing drainage channels.

impact
4.2-4
mitigation

Expansive Soil. On expansive soils with moderately high shrink-swell potential (Perkins loam and Pleasanton and Positas gravelly loam), building foundations and improvements shall consist of drilled pier and grade beams, deepened footings (extending below expansive soil), or post-tensioned slabs. Alternatively, expansive soil shall be removed and replaced with compacted non-expansive soil prior to foundation construction. The geotechnical report for each phase of the project shall require that subgrade soils for pavements consist of moisture-conditioned, lime-treated, or non-expansive soil, and that surface (including roof drainage) and subsurface water be directed away from foundation elements to minimize variations in soil moisture.

Improvements proposed to be placed on slopes greater than 10%, or within 10 feet of the tops of such slopes, shall be approved for construction by a California licensed geotechnical engineer or California certified engineering geologist. The City shall approve grading plans and slope designs prior to implementation.

4.2.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

4.2.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the requirements of the Specific Plan, impacts related to geologic hazards (slope instability, deep fill deformation, and expansive soils) and mineral resources would be reduced to a less-than-significant level. However, impacts related to expected strong seismic shaking (Impact 4.2-1) cannot be feasibly reduced to a less-than-significant level and, therefore, remain significant and unavoidable.

4.3 HYDROLOGY AND WATER QUALITY

4.3.1 EXISTING CONDITIONS

CLIMATE

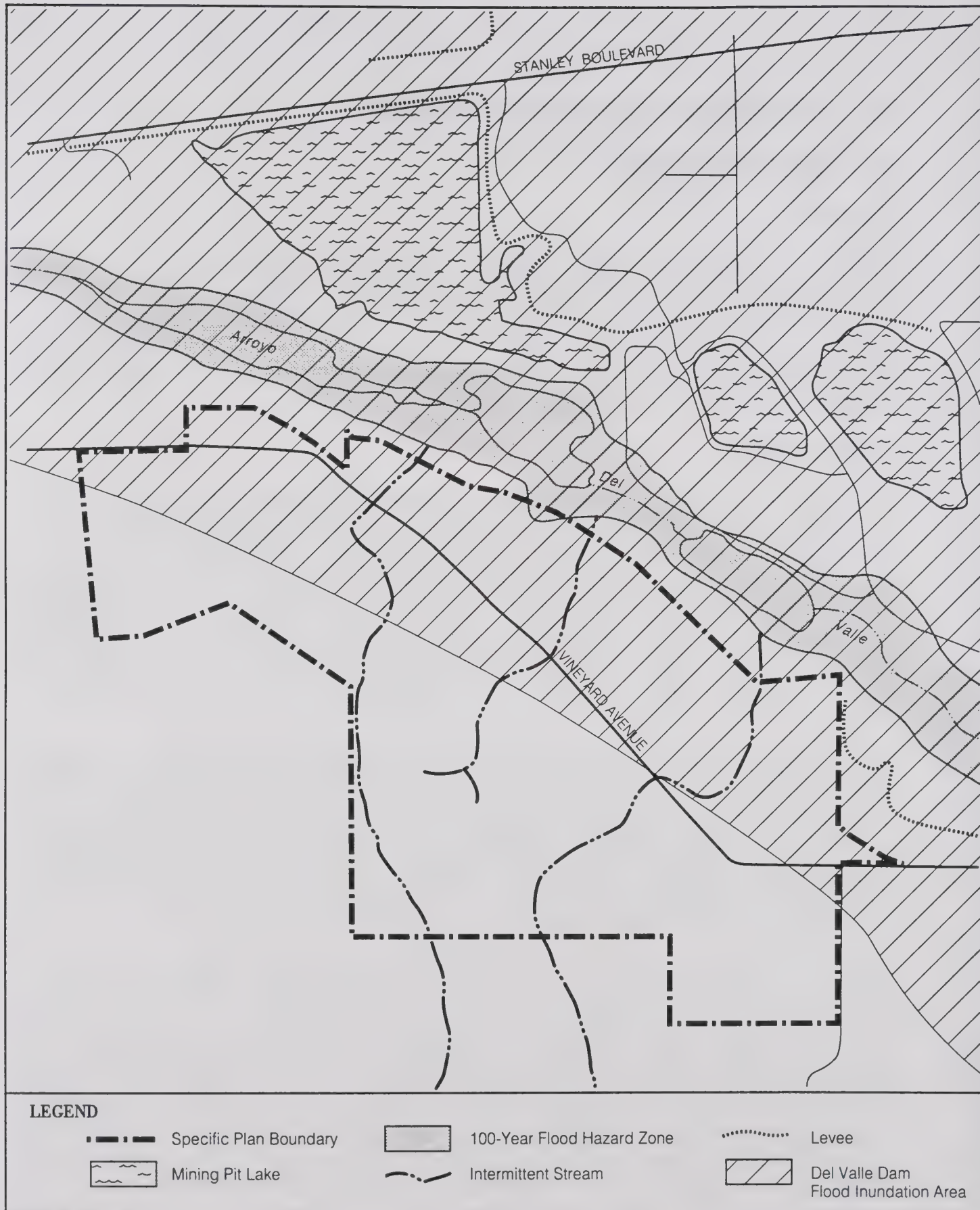
The climate of the Livermore Valley is characterized as Mediterranean, with cool wet winters and warm dry summers. The average annual temperature of the area is relatively uniform, ranging from 56 to 62 degrees (Fahrenheit). The mean annual rainfall in the vicinity of the project site, the majority of which falls between October and April, is approximately 16 inches. Analysis of long-term precipitation records indicates that wetter and drier cycles lasting several years are common in the region. Severe, damaging rainstorms occur at a frequency of about once every 3 years.

SURFACE WATER

The Specific Plan Area is part of the Livermore-Amador Valley hydrologic region. The site consists of varied topography. Ground surface elevations range from a low of approximately 390 feet above mean sea level along the northern edge of the site along Arroyo del Valle to 700 feet above mean sea level near the site's southwestern corner. The Specific Plan Area is located on the southern margin of the Livermore Valley. The southern portion of the site (south of Vineyard Avenue) is characterized by relatively steep hills and intervening valleys that generally drain northward. These creeks emerge onto a relatively flat alluvial terrace in the northern portion of the site that has formed along Arroyo del Valle. The active channel of Arroyo del Valle generally forms the northern boundary of the project site.

During storms, the creeks draining the uplands receive surface water flow from several small tributaries and overland flow. These creeks flow generally northward to Arroyo del Valle. The arroyo is a major westward flowing tributary to Arroyo de la Laguna. Arroyo de la Laguna, connects with Alameda Creek and is located within the Alameda Creek Watershed. Water flowing in these creeks evaporates, infiltrates into the subsurface, or eventually discharges into the San Francisco Bay through the Coyote Hills Alameda County Flood Control Channel. Hydrologic features of the area, including the creeks and nearby flood-prone locations (discussed below), are identified in Exhibit 4.3-1.

Current water flow (discharge) in Arroyo del Valle is significantly influenced by water resource management activities. The stream is impounded by Del Valle Dam, which is located approximately 5 miles upstream of the Specific Plan Area. Flows in the arroyo are controlled, in part, by releases from the Del Valle Reservoir, which was put into service in 1969. Runoff from the arroyo watershed, as well as water imported from the South Bay Aqueduct is stored in the reservoir. Water has been discharged from the South Bay Aqueduct to Arroyo del Valle (and other streams in the Livermore Valley) since 1962 as part of a groundwater recharge program managed by Zone 7 of the Alameda County Flood Control and Water Conservation District. The program was developed in 1969 to correct a serious overdraft of the aquifers in the valley caused by groundwater extraction for municipal and agricultural use.



Source: FEMA, 1986.

Hydrologic Features

EXHIBIT 4.3-1

In an undeveloped setting, when rainfall intensities exceed the infiltration capacity of surface soils, runoff flows over the ground surfaces toward established natural drainage channels. Stormwater runoff is then conveyed away from the area in creeks and streams. In a developed setting, an increased portion of the natural soils would be covered with impervious surfaces (i.e., roads, driveways, and roofs), increasing amounts and altering flow patterns of runoff. In developed portions of the City, storm drainage is conveyed in underground pipes, channels, and, to a lesser extent, swales. New development is required to install adequately-sized storm drains, connected to the City system, to accommodate increased runoff volumes.

FLOODING

In general, the project site is not subject to flooding. Almost all of the Specific Plan Area is located outside the 100-year flood hazard zone along Arroyo del Valle; only a small area at the northern boundary of the project site is within the 100-year flood zone (Exhibit 4.3-1). Flood flows are generally contained within the active channel of the arroyo.

The northern portion of the Specific Plan Area that occupies the alluvial terrace along Arroyo del Valle and the lower portions of the upland area would be subject to inundation in the event of a failure of the Del Valle Dam (Exhibit 4.3-1). The elevation of the project site (ranging from 390 to 700 feet above mean sea level) and distance from the coast preclude potential inundation by coastal hazards, such as tsunamis, extreme high tides, or a sea level rise.

GROUNDWATER

The Livermore Valley is comprised of several coalescing alluvial valleys developed along the major streams that flow into the basin. The alluvial sediments, including the recent alluvium and underlying Livermore Gravels which have filled the valleys, contain important aquifers that provide domestic, municipal, industrial, and agricultural water supply. These aquifers form the Livermore groundwater basin. The basin is subdivided into twelve subbasins on the basis of topography and geology. The Specific Plan Area is located within the central portion of the Amador Subbasin. Aquifers within the subbasin include a shallow unconfined aquifer in recent alluvial deposits and deeper confined or semi-confined aquifers within coarse alluvium that are separated by finer-grained deposits.

The groundwater resources in the Livermore groundwater basin are managed by Zone 7. As part of a management plan, Zone 7 maintains a groundwater monitoring network to provide regional data on basin-wide groundwater conditions. Contour maps of the groundwater elevations (water levels) within the basin are compiled in the fall and spring of each year. In the area of the proposed project, groundwater levels are generally about 80 to 100 feet below the surface of the alluvial terrace. Data collected under this program indicate that groundwater flow in the Specific Plan Area is directed to the northwest toward the center of the basin. Although the direction of groundwater flow is consistent with the topographic and geologic conditions, the flow direction is also controlled by large groundwater withdrawals occurring at gravel mining operations in the central portion of the subbasin.

The groundwater conditions in the upland area in the southern portion of the Specific Plan Area are not as well known as those on the valley floor. However, subsurface investigations at the Pleasanton Garbage Service property (Lot 14 of the project site) indicate that groundwater occurs in interbedded deposits of the Livermore Gravels at depths of less than 100 feet. Up to four distinct coarse-grained potential water-bearing zones (separated by clay and silt layers) were identified at the landfill site within 110 feet of the surface.

WATER QUALITY

The quality of surface and groundwater at the project site is affected by land uses within the entire watershed. Drainage from the site could affect the quality of water in larger creeks and drainages downstream. If persistent degradation of surface waters were to occur, groundwater quality could be affected at infiltration/recharge areas.

Water quality in surface and groundwater bodies is regulated primarily by the State and Regional Water Quality Control Boards. The project site is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board, which is responsible for implementation of State and Federal water quality protection guidelines in the vicinity of the project site.

Surface Water

Surface water occurs within the project site in three unnamed seasonal drainages and various springs. Water quality monitoring data for these surface water features were not available. It is expected, however, that water quality in the creeks is affected by agricultural land use, including livestock management, vineyards, orchards, and pasture crops. Past and current agricultural practices may contribute increased nutrient loading and residual pesticides to the creeks.

The U.S. Geological Survey and Zone 7, as part of a cooperative agreement, established a network of groundwater monitoring wells and surface water sampling locations to monitor water quality within the Livermore-Amador Groundwater Basin. Water quality data has been collected for Arroyo del Valle as part of that evaluation. The data indicate that the water in Arroyo del Valle has a relatively low specific conductance and dissolved-solids concentration (general measures of the level of mineralization of water) compared to other areas within the basin. The monitoring indicated that levels of boron in the water exceeded the water quality objective for this element.

The Alameda County Water District (ACWD) is a retailer of potable water to the cities of Fremont, Newark, and Union City. A significant portion of the water supplied by the ACWD is derived from runoff from the Alameda Creek Watershed, including State Water Project entitlement water which is transported via Alameda Creek. Potential degradation of water quality in surface water runoff that enters Alameda Creek, could eventually enter the groundwater aquifer, affecting drinking water supplies for several hundred thousand users.

Groundwater

Regional groundwater quality within the Livermore Valley has also been monitored by the USGS and Zone 7. Groundwater in the southern portion of the valley, including the Specific Plan Area, is characterized as a sodium/magnesium-type water with a moderately low specific conductance (600 to 1,000 microohms/centimeter). California has set a recommended secondary drinking water standard of 900 microohms/centimeter. Nitrate levels are typically 5 milligrams/liter (mg/l) or less, lower than the maximum contaminant level (MCL) for drinking water (10 mg/l). Boron levels are generally less than 1 mg/l. Levels of boron in excess of 1 mg/l can adversely impact crop growth but these levels in water are not known to be adverse to human health. In general, this water quality data indicates that the groundwater in the Specific Plan Area would be suitable as a drinking water or irrigation water supply, provided that the water does not contain other harmful compounds.

Additional groundwater sampling occurred during evaluation of the former landfill at the Pleasanton Garbage Service property in the northwestern portion of the Specific Plan Area. In 1990, a Solid Waste Assessment Test Report (SWAT) was prepared for the landfill in compliance with the requirements of the California Water Code. The evaluation included quarterly groundwater sampling of four monitoring wells installed at the landfill site over the period October 1989 to May 1990. The groundwater samples were analyzed for general chemistry (including pH, electrical conductivity, total dissolved solids, and hardness), nitrates, sulfate, chemical oxygen demand, pesticides, volatile organic compounds, and chlorinated hydrocarbons.

Based on groundwater flow direction, one of the wells was located upgradient of the landfill to provide background water quality data. The results of analytical testing of the upgradient well groundwater samples indicated that the average values for electrical conductivity and total dissolved solids (745 mg/l) exceeded the secondary drinking water standards. Additionally, mercury, arsenic, selenium, iron, benzene, nitrate, and chloride were detected (although not in all sampling events) at levels above primary or secondary MCLs. The water quality data collected from downgradient wells indicated sporadic detection of benzene, toluene, trans-1,2 dichloroethylene, tetrachloroethylene, and chloroform. Of these compounds, only benzene was detected above the MCL. In addition, the total dissolved solids, nitrate, and barium were detected above the MCLs. Although contaminants were detected in some of the wells during some of the sampling events, the SWAT report concluded that the inconsistent detection of these compounds indicated that "it is unlikely the landfill is adversely affecting the groundwater at beneath the [landfill] site."

Other potential sources of surface or subsurface water quality degradation exist within the Specific Plan Area. Historic and current agricultural uses (orchards, vineyards, and row crop production) within or adjacent to the area may have resulted in the release (spilled or applied) of hazardous materials, including pesticides, fertilizers, petroleum fuels, or total dissolved solids (TDS). In addition, urban stormwater pollutants related to roadway operation (e.g., petroleum fuels, lubricants, and metals) and home maintenance (e.g., pesticides, fertilizers, and cleaning materials) can result in water quality degradation and the long-term operation of roadways can adversely affect water quality.

Relevant General Plan Policies and Programs

The following hydrology policies and programs included within the General Plan Public Facilities Element are applicable to the proposed project.

Policy 1: Phase construction of permanent City sewer, water, and storm drainage improvements as a condition of new development to maintain City service standards.

Program 5.1: Require new development to pay its fair share of the storm drainage system improvement costs.

Program 5.4: Require new development to improve local storm drainage systems to accept appropriate design year flows resulting from new development, as determined by the City Engineer.

Program 6.1: Require new development to pay its fair share of the flood control improvement costs included in Zone 7's Master Plan.

Program 6.2: Ensure that detention basins are designed to allow for public amenities, recreation, natural habitat, and agriculture, where feasible.

The following water quality policy and program included in the General Plan Conservation and Open Space Element are applicable to the proposed project.

Policy 9: Protect the quality and quantity of surface water and groundwater in the Planning Area.

4.3.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Based on the CEQA Guidelines, substantial flooding, degradation of water quality, contamination of a public water supply, substantial interference with groundwater recharge, and altering the direction or flow of groundwater would be considered significant effects.

SPECIFIC PLAN GUIDELINES

The Specific Plan includes measures that are intended to reduce potential hydrology and water quality impacts to less-than-significant levels. These measures are included at the end of this section.

PROJECT IMPACTS

Impact 4.3-1

Increased Runoff. Development of the Specific Plan Area would result in the construction of additional impervious surfaces within the project site and may increase runoff. This would be considered a potentially significant impact.

Development of the project site, particularly areas of proposed residential development, would result in an increase in the amount of impervious surfaces (buildings, paved roadways and driveways). Undeveloped, vegetated lands generally have low runoff coefficients, meaning that they yield a relatively small portion of the total rainfall as runoff. The majority of the precipitation, particularly in smaller storms, infiltrates into the subsurface. Impervious surfaces yield nearly all rainfall as runoff. Increased runoff volume could exceed the capacity of downstream drainage components, potentially causing localized flooding. This would be considered a potentially significant impact.

Impact 4.3-2

Development Runoff Quality. Construction activities and post-construction site uses associated with the project could result in degradation of water quality in nearby surface water bodies by reducing the quality of storm water runoff. This would be considered a potentially significant impact.

Construction and grading within the project site would require temporary disturbance of surface soils and removal of vegetative cover. During the construction period of the project, grading and excavation activities would result in exposure of soil to runoff, potentially causing erosion and entrapment of sediment in the runoff. Soil stockpiles and excavated parcels in the project site would be exposed to runoff and, if not managed properly, the runoff could cause erosion and increased sedimentation in storm sewers or water courses at or away from the project site. The accumulation of sediment could result in blockage of flows, potentially resulting in increased localized ponding or flooding, and interference with mining operations in nearby areas.

Chemicals could be released at construction sites during grading operations. Once released, substances such as fuels, oils, paints, and solvents could be transported to nearby surface waterways and/or groundwater in storm water runoff, wash water, and dust control water, potentially reducing the quality of the receiving waters.

In addition, increased rates of uncontrolled runoff could result in erosion of site soils. Such erosion could cause increased turbidity or sedimentation in streams at the project site or in Arroyo del Valle that could adversely affect aquatic habitat. These would be considered potentially significant project impacts.

A discussion of potential water quality effects associated with the former landfill located on Lot 14 is included in the Public Health and Safety section (Section 4.9) of this report.

Agricultural Chemical Use. The development and operation of vineyards and other possible crops and orchards within the project site could result in the discharge of agricultural chemicals to surface and subsurface waters potentially causing water quality degradation. This would be considered a potentially significant project impact.

The project proposes development of vineyards and possibly other crops along the northern and eastern boundaries of the Specific Plan area. Most of these areas are located adjacent to Arroyo del Valle. Improper design and management practices could result in discharge of runoff containing elevated levels of nutrients and pesticide residues. Nitrogen and pesticide compounds may also leach through soil layers and contact groundwater. Additionally, beneficial soil organisms, wildlife, and aquatic systems may be exposed to pesticides. These would be considered significant impacts. The following sections present a discussion of potential pollutants associated with the operation of vineyards and other possible crops.

Nitrate Runoff and Leaching

The following discussion focuses on the chemicals typically used for vineyard operations because grapes are the most likely crop to be planted in the Plan Area. However, other crops may also be planted on the site. Although other crops may require different chemical treatments, the potential impacts from these chemicals would have environmental impacts similar to those discussed below.

Although nitrogen needs for grapes are generally considered low compared to many other crops, nitrogen/phosphorous-based fertilizers can be used on vineyards to encourage vine growth and regeneration. Nitrates have been associated with several environmental problems including eutrophication of lakes, alteration of the productivity of natural ecosystems, and acid rain. The effects of nitrates on human health is also a concern. The U.S. EPA and the SFRWQCB recommend a maximum concentration of 10 parts per million (ppm) of nitrates in drinking water.

During heavy storms or excess irrigation where water does not percolate, nitrates and phosphorous may be carried off-site by runoff. Vineyard areas that drain directly into sensitive drainages without berms or swales intercepting surface flows, or areas that are not buffered by native grasses or dense vegetation separating the vineyards from the drainage channels and creeks, may allow nitrates and phosphorus to enter the drainage by surface flow. However, proper grading and drainage and dense ground cover can reduce runoff to near zero for typical storm events. Surfaces with dense ground cover have low runoff coefficients (0.10 to 0.35) compared to bare soil or impervious cover. The minimal slope (generally less than 2%) of the areas of the project site proposed for vineyards would also reduce the potential for significant runoff from properly graded vineyards.

The leaching of nitrates into groundwater depends on the water solubility of the nitrogen-based fertilizer, the persistence of the fertilizer compound, the rate at which the nitrate-containing leachate percolates into the soil, and the depth to the groundwater table. Much of the nitrates and pesticides are taken up by the plant or reside in the root zone. The more persistent and water soluble the nitrogen-based fertilizer is, the greater likelihood the nitrates may percolate. Sandy soils tend to permit greater percolation while clay based soils inhibit leaching, but encourage greater runoff when the soil

is saturated. The soils at the project site in areas for proposed crop production are predominately loam and gravelly loam. These soils would have a moderate infiltration capacity.

Pesticide Runoff and Leaching

Commonly, demand for pesticide use for wine grapes is also relatively low. However, some vineyards use pesticides (inclusive of herbicides, insecticides, fungicides) for control of weeds and eradication of nematodes and pathogens (including phylloxera and Pierce's disease). The most common pest control treatment is the application of sulfur for control of mildew. Pesticide application can cause water quality impacts if pesticides are applied in areas that flow directly into sensitive drainages. The method by which pesticides run off into sensitive drainages is similar to that of nitrates discussed above. Compounds that are applied as aerosols (pesticides) or dust (sulphur) can be picked up by wind (drift) and be directly deposited in stream courses.

Any pesticide that is tightly adsorbed or bound to soil or organic matter is less likely to volatilize, leach, be degraded by microorganisms, or even be adsorbed by plants. Aside from organic matter, clay particles play the greatest role in retarding pesticide movement. The negatively charged ions of chemical particles readily attach to the positively charged ions found in clay. Most of the soils in the project site are high in clay content. The mobility of chemicals through the native soil would be limited by the moderate percolation rate of the soil and the ability of the clay-based soils to adsorb and bind the pesticide. In general, sulphur is biodegradable in the environment. Although microbiological reduction to hydrogen sulfide or oxidation to sulfuric acid is possible in the environment, the concentrations of sulphur discharged through normal agricultural application would not be expected to generate significant amounts of these potential environmental pollutants. However, the use of pesticides on the project site would be considered a potentially significant impact because of its potential to adversely affect groundwater. Please see the discussion included in the Public Health and Safety section (Section 4.9) of this report for more information regarding public health concerns associated with chemical use in agricultural operations.

Impact
4.3-4

100-year Flooding. Flooding along Arroyo del Valle could result in damage to non-flood sensitive uses in a small area at the northern site boundary. This would be considered a less-than-significant impact.

Almost the entire project site is located outside 100-year flood hazard zones identified on the regional Flood Insurance Rate Maps. Within these areas, the potential for flooding is very low, restricted to localized ponding. Although the northern margin of the project site is located within the 100-year flood hazard zone of Arroyo del Valle, the proposed project would include portions of the realigned Vineyard Avenue and proposed vineyards within this area. The effects of flooding on these uses would be relatively easily repaired and would, therefore, be considered less than significant.

Impact
4.3-5

Dam Failure Flooding. The northern portion of the project site is within the dam failure inundation area for Del Valle Reservoir. Flooding of the site during a dam failure event could result in damage to structures and other improvements and may cause injury or loss of life. The probability of a

dam failure is remote and not foreseeable. Therefore, this impact would be considered less-than-significant.

The relatively flat area of the northern portion of the project site along the Arroyo del Valle is within the dam failure inundation area for Del Valle Reservoir. The proposed project includes vineyards or other crops, residential land uses, and a school site within the inundation area (Exhibit 4.3-1). These uses would be significantly affected by a flood associated with a dam failure. The risk of such a failure is very low. The City General Plan includes a program (Program 14.1) to conduct public meetings and issue press releases regarding public evacuation procedures in the event of a failure of the dam. Given the low probability of a dam failure event and the existing City program to inform the public on emergency procedures, the impact on the project site would be considered less than significant.

Impact
4.3-6

Water Quality Degradation from Salt Loading. Land uses proposed within the Specific Plan Area would increase the discharge of salts into surface and subsurface waters, potentially causing water quality degradation in the groundwater basin or the Alameda Creek watershed. This would be considered a less than significant impact.

Proposed agricultural operations and landscaping irrigation in the Specific Plan Area would be expected to increase the discharge of salts into surface and subsurface waters, potentially increasing the salt loading in the local groundwater basin and surface water. Currently, pasture land is the dominant agricultural use. Nineteen rural residences, small orchards, and vineyards are also present. Although historically more intensive agriculture has occurred at the project site, the proposed development of vineyards would increase water applied for irrigation. Plants use the applied water but do not take up all of the salts within the water, allowing salts to accumulate in the soil. These salts can be leached by subsequent irrigation or precipitation and be transported as dissolved solids to surface and subsurface waters. Water usage for the Specific Plan area associated with proposed agricultural and residential development, including the vineyards in the northern and eastern boundaries of the Specific Plan area, the 20-acre park, school, and residential development would increase the rate of irrigation by approximately 255 acre-feet per year (Appendix D).

Under current conditions, the water supply for all uses within the Specific Plan area is provided by private wells. The wells draw water from the Amador subbasin of the Amador-Livermore Valley groundwater basin. The groundwater from this area contains relatively high levels of total dissolved solids (TDS), a measure of salt content. Based on the measured electrical conductivity (600 to 1,000 micromhos per centimeter, (umhos/cm)), the TDS level is in the approximate range of 390 to 650 milligrams/liter (mg/L) (Sorenson and others, 1985). This level is high compared to the California secondary drinking water standard of 500 mg/L for TDS. Laboratory analysis of groundwater collected from the project site over the period 1990 to 1997 (Pertrucci and Dellavalle, 1997) indicate that the average electrical conductivity was 647 umhos/cm (approximately equivalent to a TDS level of 420 mg/L). When this water is applied as irrigation supply, the potential for salt loading is a concern. Additional sources of TDS within the project site are septic/leachfield systems which provide on-site wastewater treatment for the existing homes and businesses. The TDS level of wastewater disposed of by these systems is high, approximately 850 mg/L (Metcalf & Eddy, 1972). Infiltrating wastewater from these systems can be a significant source of salt migration to surface and subsurface water.

Under the proposed project, the water supply for proposed homes and businesses would be provided from the City's water system. Wastewater from these uses would be collected and directed into the City's sewer system and use of on-site septic/leachfield systems would be discontinued. The proposed vineyards would be irrigated with groundwater supplied by on-site wells; City water would be used for all other irrigation needs. The average TDS level for City water that would be delivered to the project site is approximately 201 mg/L (City of Pleasanton, 1998), significantly lower than the currently used groundwater supply. Although the TDS concentrations in water used for landscape irrigation would be reduced, the amount of water applied for irrigation would increase under the proposed project, possibly resulting in increased salt loading from the project site. Irrigation of the vineyards proposed by the project with on-site groundwater would also contribute to salt loading. The increased salt load related to the proposed project was estimated using the methodology developed in the 1996 Final EIR for the San Ramon Valley Recycled Water Program prepared by the Dublin San Ramon Services District and East Bay Municipal Utility District Recycled Water Authority (DERWA) using conservative assumptions that would tend to overestimate the impact. The estimated increase in salt load generated at the project site would be approximately 110 tons/year (Appendix D).

Conservatively assuming that all of the additional salt generated at the site could infiltrate to the groundwater, that all groundwater could discharge to Arroyo Valle, and that the surface flow in this creek could eventually reach Alameda Creek, the net increase in TDS concentration in the creek would be approximately 0.6 mg/L above the existing average level of 454 mg/L (Appendix D), representing an approximate 0.1 percent increase. However, it is likely that some of the additional salts would be metabolized by the vineyard crops and some salt would be stored in the root zone. Even under the assumed conditions, the project would not increase TDS to a level above secondary drinking water standards (500 mg/L). It should be noted that the secondary drinking water standards reflect consumer acceptance limits that if exceeded may cause a substantial number of people to discontinue use of the water, but would not, in general, be hazardous to health. The incremental increase in TDS levels within surface water would not be expected to adversely affect aquatic habitat. Therefore, the increased salt loading is a less than significant impact of the project.

The incremental increase of salt loading related to the project may cause a cumulative adverse impact on the quality of regional water resources. The relatively high TDS levels in groundwater within the Livermore-Amador Valley groundwater basin have been recognized for decades as a difficult problem in water supply management. As early as 1955, urban development and related wastewater treatment and discharge has been recognized as contributing to salt loading within the Alameda Creek watershed and as a detrimental impact on the quality of water extracted from the Niles Cone well field operated by the Alameda County Water District (ACWD). In response to concerns related to this water quality issue, Zone 7 and ACWD have initiated a series of resource management plans, including the Wastewater Management Plan for the unsewered, unincorporated areas, the Alameda Creek Watershed Management Plan, and the Salt Management Plan.

Salt loading is a problem typically associated with reclaimed water sources, particularly when used for irrigation purposes. In general, reclaimed water contains higher total dissolved solids (TDS) levels than potable water sources. This issue was described in the 1996 DERWA EIR which acknowledged the need for implementation of a pro-rata share of salt reduction techniques required by the Alameda Creek

Watershed Management Plan and the Salt Management Plan for demonstrated and significant salt loading that may arise from recycled water use. To date, salt reduction requirements have not been developed for recycled water use or other uses which may contribute to the regional salt loading problem.

Arguably, any additional increase in water applied as irrigation within the Alameda Creek watershed could contribute incrementally to the salt loading problem. Without an established numerical significance criteria recommended by the Zone 7, ACWD, or by the Regional Water Quality Control Board, the significance of the incremental increase in salt loading associated the Vineyard Corridor Specific Plan or any other proposed development cannot be accurately determined. However, future evaluation of the regional salt loading impacts by the Zone 7 Salt Management Plan and/or the Alameda Creek Watershed Plan may provide standards or guidelines for future development within the Livermore-Amador Valley. The City of Pleasanton will continue to support the ACWD and Zone 7 in the evaluation of the salt loading issues.

Aspects of the proposed project limit the amount of salt loading that may be related to implementation of the Specific Plan. Reclaimed water is not proposed for use in the Specific Plan area, thereby reducing potential salt loading impacts to surface and subsurface waters in the basin. The imported potable water source for residential use contains lower TDS levels (201 mg/L) than ambient groundwater conditions within the basin (420 mg/L), reducing the impact relative to the condition where all residential irrigation supply would come from on-site wells. Water conservation measures associated with the proposed project would also reduce the salt loading associated with the proposed project. The use of drip irrigation systems for the vineyards instead of spray irrigation could increase water application efficiency by 30 percent or more, further reducing salt loading. In addition, the City will, to the extent possible, encourage the use of imported water with lower TDS concentrations (e.g. City or South Bay Aqueduct water) for irrigation of the proposed vineyards to reduce the application of groundwater. Use of such untreated water could reduce salt loading at the vineyards by approximately 36 percent. Given these mitigations and the continued support by the City for evaluation of salt loading issues in the Livermore-Amador Valley, the cumulative impact of incrementally increased salt loads associated with implementation of the Specific Plan is reduced to a less-than-significant impact.

4.3.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.3-1
mitigation

Increased Runoff. Grading and drainage design plans shall be submitted to the City Engineer for each phase of development within the Plan Area and reviewed for compliance with all applicable City requirements. The drainage plans shall demonstrate that the proposed developments would minimize or eliminate increases in the volume or rate of runoff from the development sites.

Following PUD development plan approval and prior to the installation of any new vineyards or other crops, each individual agricultural operator shall submit a grading plan to the City Engineer. The grading plan shall identify features for site drainage, runoff control, and appropriate best management practices for control of erosion and sedimentation.

impact
4.3-2
mitigation

Development Runoff Quality. Projects disturbing more than five acres of land during construction shall be required to file a Notice of Intent (NOI) to be covered under the State NPDES General Construction Permit for discharges of storm water associated with construction activity. The developer must propose control measures that are consistent with the permit.

A Storm Water Pollution Prevention Plan (SWPPP) shall be developed and implemented for each site covered by the permit. A SWPPP should include Best Management Practices (BMPs) designed to reduce potential impacts to surface water quality through the construction and life of the project. A SWPPP shall be prepared such that, when properly implemented, it will reduce or eliminate impacts to surface water quality from all phases of the project. Required elements of the SWPPP include:

Construction Storm Water Management Controls. These controls shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with storm water. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain.

An important component of the storm water quality protection effort is knowledge of the site supervisors and workers. To educate onsite personnel and maintain awareness of the importance of storm water quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP.

The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, and must include both dry and wet weather inspections. City of Pleasanton personnel will conduct regular inspections to ensure compliance with the SWPPP (this is already standard procedure). RWQCB personnel, who may make unannounced site inspections, are empowered to levy considerable fines if it is determined that the SWPPP has not been properly prepared and implemented.

Erosion and Sediment Control. Best Management Practices (BMPs) designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization controls, watering for dust control, perimeter silt fences,

placement of hay bales, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control to keep sediment on the slopes. End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. If hydroseeding is selected as the primary soil stabilization method, then slopes shall be seeded by September 1 and irrigated to ensure that adequate root development has occurred prior to October 1. Entry and egress from the construction site shall be carefully controlled to minimize offsite tracking of sediment. Vehicle and equipment wash down facilities shall be designed to be accessible and functional both during dry and wet conditions.

Post-Construction Storm Water Management. This refers to measures taken to prevent storm water pollution associated with post-construction activities at the developed site. Because the project includes relatively low-density development, it may be practical for the design of the residential development areas to include no net gain in stormwater runoff from the site. Large single-family home lots generally provide many opportunities for stormwater management, including unit pavers on sand patios, concave lawn infiltration basins, and dry-wells connected to roof downspouts.

BMPs required in the SWPPP and grading plan requirements described in Impact 4.3-1 would effectively reduce or eliminate increased erosion while mitigating potential impacts related to sediment transport from residential development sites on runoff water quality. However, these requirements do not specifically address the potential erosion and sedimentation impacts associated with vineyard or other crop development and operations. The grading plan requirement discussed in Impact 4.3-1 would address the potential impacts of erosion and sedimentation associated with vineyards and other crops.

Impact
4.3-3
mitigation

Agricultural Chemical Use. Each individual vineyard or other crop owner of agricultural land shall be responsible for the preparation of an Integrated Pest Management (IPM) plan. The plan shall specify reduction of agricultural chemical (e.g., pesticides, fertilizers, etc.) use as an objective and present specific non-chemical measures (e.g., site planning, mechanical methods, or biologic controls) as alternatives to agricultural chemical use.

Impact
4.3-5
mitigation

Dam Failure Flooding. Although the potential for a dam failure is unlikely, development of the proposed elementary school and any possible day-and-breakfast labs, spas, restaurants and/or conference facilities within the inundation area will require the preparation of evacuation plans.

4.3.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

4.3.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the requirements of the Specific Plan, hydrology and water quality impacts would be reduced to a less-than-significant level.

4.4 BIOLOGICAL RESOURCES

General and sensitive biological resources that occur or potentially occur in the Specific Plan Area are discussed in this section. Impacts anticipated with implementation of the project and mitigation measures designed to reduce those impacts are also presented.

The biological resources investigation for this EIR involved the following: (1) baseline data collection and literature review, (2) field surveys and reconnaissance, (3) evaluations of potentially-occurring special-status species, (4) vegetation/habitat mapping, and (5) consultation with agencies and relevant resource specialists.

A number of previous studies have addressed the biological resources in the vicinity of the Plan Area including: *Draft Environmental Impact Report for the Happy Valley Specific Plan and Related Planning and Development Actions* (Mundie & Associates, February 1998), *The Pleasanton General Plan* (City of Pleasanton 1996), and *Preliminary Background Report General Plan Study for Vineyard Avenue Corridor* (WPM Planning Team 1994). Relevant technical information from these documents is incorporated into this EIR and referenced as appropriate. To obtain information regarding special-status species in the Plan Area, the following on-line data bases were reviewed: the California Department of Fish and Game's (CDFG) *California Natural Diversity Data Base* (CNDDDB) and the California Native Plant Society's (CNPS) *Electronic Inventory of Rare and Endangered Vascular Plants*.

4.4.1 ENVIRONMENTAL SETTING

GENERAL BIOLOGICAL RESOURCES

A total of four habitat types were identified within the project area: annual grassland, blue oak woodland, agricultural land, and seasonal wetlands. The location of these habitats is shown on Exhibit 4.4-1.

Annual Grassland

Annual grassland covers much of the undeveloped land south of Vineyard Avenue. In the hills in the southern half of the Plan Area, patches of open grasslands are often scattered among stands of blue oak trees. Some of these areas are used as grazing land for livestock. North of Vineyard Avenue, this habitat has become reestablished in fallow fields and abandoned orchards. Annual grassland habitat in the Plan Area is dominated by non-native grasses and forbs such as wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum jubatum*), filaree (*Erodium cicutarium*), vetch (*Vicia sativa*), fiddleneck (*Amsinckia intermedia*), and wild radish (*Raphanus sativa*).

Grasslands typically support a relatively low diversity and abundance of wildlife species compared to other natural habitats. Common wildlife species observed in grasslands in the Plan Area include western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaidura macroura*), brown-headed cowbird (*Molothrus ater*), black-tailed jackrabbit (*Lepus californicus*), and wild turkey (*Meleagris gallopavo*).

Blue Oak Woodland

Blue oak woodland is the dominant habitat type in the hills of the south-central portion of the Plan Area. This habitat is characterized by a partially closed to mostly open canopy of oak trees and a grassy understory. Blue oak (*Quercus douglasii*) is the dominant species, comprising approximately 90 percent of the trees present. Other trees found in this habitat include valley oak (*Quercus lobata*) and coast live oak (*Quercus agrifolia*). A few shrub species are present along drainages and on shady north-facing slopes, including toyon (*Heteromeles arbutifolia*) and poison oak (*Toxicodendron diversilobum*). During spring field surveys, a number of native annual and perennial wildflowers were observed in the Plan Area including johnny-tuck (*Triphysaria eriantha*), buttercup (*Ranunculus* sp.), blue-eyed grass (*Sisyrinchium bellum*), and blue dicks (*Dichelostemma capitatum*).

Blue oak woodland in the Plan Area provides important foraging and breeding habitat for many wildlife species. A few of the wildlife species observed during field surveys include western fence lizard (*Sceloporus occidentalis*), western scrub-jay (*Aphelocoma californica*), acorn woodpecker (*Melanerpes formicivorus*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), and western bluebird (*Sialia mexicana*). Other wildlife species expected to occur in the Plan Area but not observed include western gray squirrel (*Sciurus griseus*), coyote (*Canis latrans*), and gray fox (*Urocyon cinereoargenteus*).

Agricultural Land

Agricultural land uses in the Plan Area include row crops, vineyards, and orchards. The majority of the Plan Area north of Vineyard Avenue has been used to raise oat hay crops in past years (WPM Planning 1994). Some of these fields are now fallow and dominated by non-native grasses. Other agricultural land uses include a few small walnut orchards and a small on Lot 26.

Agricultural land is used by a variety of animals for foraging as well as breeding habitat, depending on crop type. Wildlife species observed in the agricultural portions of the Plan Area include mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), California ground squirrel (*Spermophilus beecheyi*), and Brewer's blackbird (*Euphagus cyanocephalus*).

Seasonal Wetlands

Seasonal wetlands in the Plan Area include four intermittent drainages, two seasonal ponds, and a seep. All four of the small intermittent drainages flow from south to north across the Plan Area. Three of the drainages flow into the Arroyo del Valle. A seasonal seep is located at the downstream terminus of the other drainage in the southeastern portion of the Plan Area (Exhibit 4.4-1). No woody riparian habitat is present along any of these small drainages, but sedges (*Carex* sp.) and other herbaceous plants typically associated with seasonal wetlands occur at scattered locations along the banks of all four drainages. The drainages may contain water up to 12 inches deep after periods of moderate to heavy rain, but these drainages usually dry quickly because of relatively steep gradients. Berms have been placed on the central and eastern drainage to form what appears to have once been small ponds (identified as seasonal wetlands in Exhibit 4.4-1). The basins of these two depressions and the seep support an assemblage of water-tolerant grassland plant species such as cocklebur (*Xanthium strumarium*), bermuda grass (*Cynodon dactylon*), and curly dock (*Rumex crispus*).



LEGEND

--- Specific Plan Boundary

PLANT COMMUNITIES

- B** Blue Oak Woodland
- A** Agricultural Land
- U** Urban Development
- G** Annual Grassland
- N** Plant Nursery

SENSITIVE BIOLOGICAL RESOURCES

- ~~~~~ Intermittent Drainage
- SW** Seasonal Wetland
- S** Seep

EXHIBIT 4.4-1

Biological Habitats

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN
IN 85002.01 7/98



When inundated during winter and spring, seasonal wetlands can be important habitat for a number of wildlife species. However, seasonal wetlands in the Plan Area contain surface water for only short durations and provide very limited amounts of cover. Wildlife observed near seasonal wetlands in the Plan Area include Pacific tree frog (*Hyla regilla*), killdeer (*Charadrius vociferus*), song sparrow (*Melospiza melodia*), and American robin (*Turdus migratorius*). These areas also provide a source of water for mammals, such as black-tailed deer (*Odocoileus hemionus*). Invertebrates observed in the seasonal ponds include water boatman (*Corixa* sp.), whirling beetle (*Gyrinus* sp.), predacious diving beetle (*Dytiscos* sp.), small mayfly (*Baetis* sp.), and mosquito larva (*Culex* sp.).

Sensitive Biological Resources

Biological resources that have been given special recognition by federal, state, or local resource conservation agencies and organizations are discussed in this section. This includes biological resources that are afforded specific legal consideration and/or protection through the following: CEQA; California Fish and Game; Federal Endangered Species Act; State Endangered Species Act; and Federal Clean Water Act.

Wetlands and other Jurisdictional Waters of the United States

Waters of the United States include wetlands (e.g., special aquatic sites such as seasonal ponds and marshes) and other jurisdictional waters, such as lakes, ponds, rivers, and intermittent drainages. Wetlands are defined as “...those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (U.S. Army Corps of Engineers [USACE] 1987). The majority of jurisdictional wetlands meet three wetland delineation criteria: hydrophytic vegetation, hydric soils types, and wetland hydrology.

Wetlands are subject to Section 404 of the Clean Water Act which establishes a requirement to obtain a permit from USACE prior to filling jurisdictional wetlands. In general, fills of wetlands that are less than 3 acres may be covered under one of the many pre-existing Nationwide Permits. Fills exceeding 3 acres would require a special Individual permit.

While riparian habitat (i.e., the land and plants bordering a watercourse or stream) often meets the USACE criteria of jurisdictional Waters of the United States, its also frequently regulated under California Fish and Game Code Section 1603. Pursuant to Section 1603, a Streambed Alteration Agreement is required from the California Department of Fish and Game (CDFG) for projects that have the potential to affect streambeds, lakebeds, or their associated riparian habitat. CDFG has adopted a “no net loss” policy of wetland acreage or value.

Arroyo del Valle

The Arroyo del Valle, located along the northern boundary of the Plan Area, represents one of the few remaining significant stands of mature riparian woodland in the greater Pleasanton-Livermore area. Riparian woodland is considered one of the most valuable native habitat types in California because it supports a wide diversity of wildlife species, many of which are considered rare or uncommon.

Riparian woodland in the Arroyo del Valle provides habitat for many wildlife species, including nesting habitat for both migratory and resident birds. The Arroyo del Valle also represents a potential movement corridor for wildlife. The regional and statewide decline of riparian woodland due to urban and agricultural development is a concern to CDFG, U.S. Fish and Wildlife Service (USFWS), and other resource agencies.

Oak Woodland

Oak woodlands are not specifically protected by state or federal law as a sensitive biological resource. However, mature oaks and other trees meeting the City's definition of "Heritage" trees are addressed under Chapter 17.16 of the City of Pleasanton Heritage Tree Ordinance. It is the intent of this ordinance to preserve as many Heritage trees as possible throughout the City through the staff review and development review process.

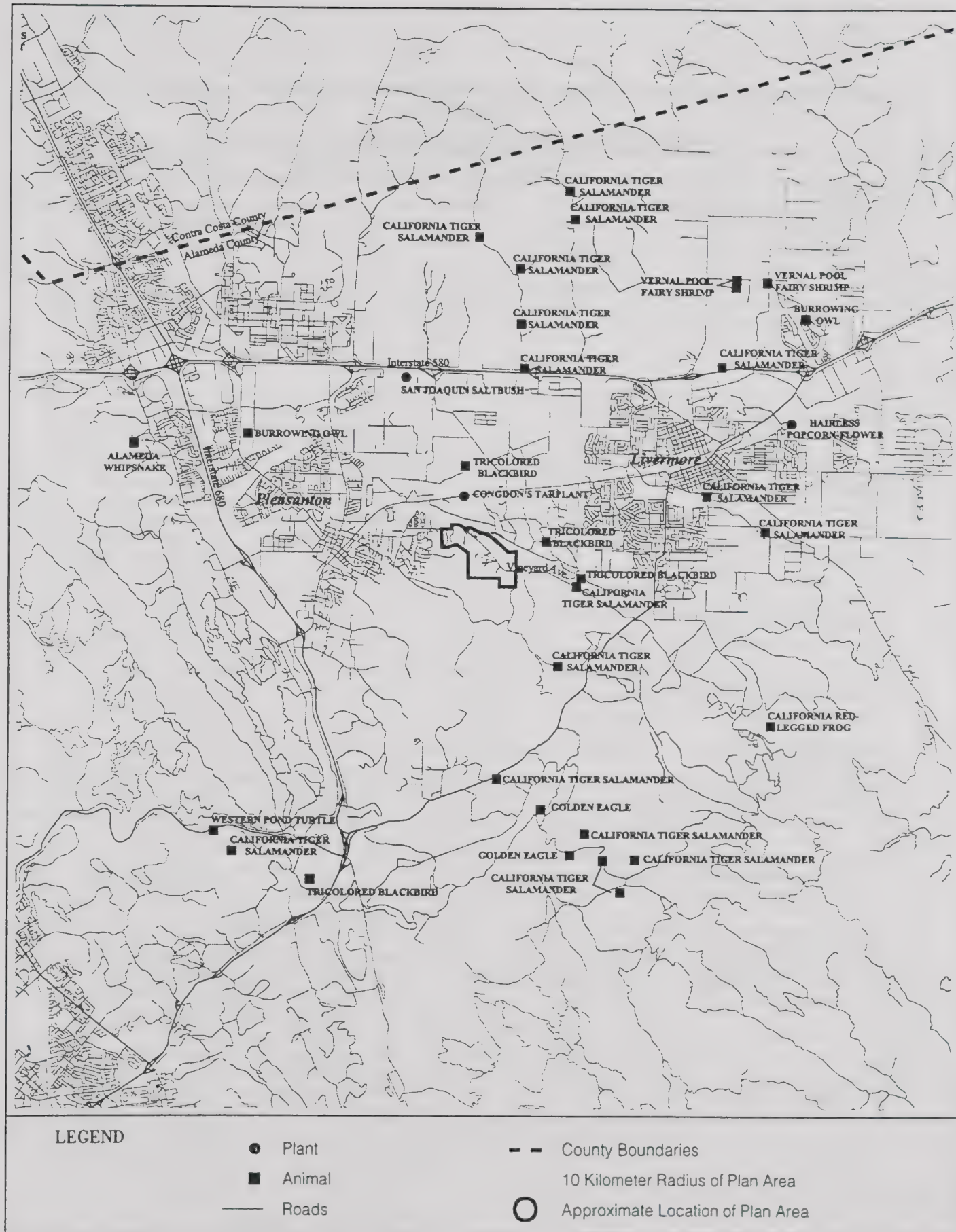
Raptors

Raptors (i.e., hawks, owls, eagles, falcons) are considered sensitive species by CDFG, and the removal or destruction of an active raptor nest is a violation of the California Fish and Game Code Section 3503.5. Several species of raptors are known to occur in the Plan Area including red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and red-shouldered hawk (*Buteo lineatus*). An active raptor nest located in the western portion of the plan area was reported to the City Department of Planning and Community Development by a local resident in 1998.

Special-status Species

Species protected by federal, state, or local resource conservation agencies and organizations are considered special-status species. This includes species listed as state and/or federally Threatened or Endangered; those considered as candidates for listing as Threatened or Endangered; those identified by CDFG as California Species of Special Concern; and plants considered rare, threatened, or endangered by CNPS. California Species of Special Concern and plants listed by CNPS do not receive legal protection under the California Endangered Species Act; however, impacts to these species may be considered significant under the California Environmental Quality Act.

A number of special-status species have geographic ranges which include the Plan Area. Based on data from previously completed biological studies and the CNDDDB, three listed (i.e., Threatened or Endangered) species and one federal candidate for listing were determined to have a potential for occurrence within the Plan Area: California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana aurora draytonii*), Alameda whipsnake (*Masticophis lateralis eurxanthus*), and San Joaquin kit fox (*Vulpes macrotis mutica*). These four species are discussed below. A list of all special-status species that have been observed in the vicinity of the Plan Area is presented in Table 4.4-1. The distribution of these observations (within a 10 kilometer radius of the Plan Area) is presented in Exhibit 4.4-2.



Source: CNDDDB, 1997; Teale Data Center.

Special Status Species Occurrences in the Vicinity of the Plan Area

EXHIBIT 4.4-2

Table 4.4-1
Sensitive Species Potentially Occurring in The Plan Area

SPECIES	USFWS	CDFG	CNPS	HABITAT	POTENTIAL FOR OCCURRENCE
PLANTS					
HAIRLESS POPCORN-FLOWER <i>Plagiobothrys glaber</i>	-	-	1A	meadows with alkaline soils and coastal salt marshes	Presumed extirpated from Alameda County.
SAN JOAQUIN SPEARSCALE <i>Atriplex joaquiniana</i>	-	-	1B	chenopod scrub, meadow, seeps, and valley and foothill grasslands with alkaline soils	Unlikely to occur. No appropriate habitat within the Plan Area.
CONGDON'S TARPLANT <i>Hemizonia parryi congdonii</i>	-	-	1B	valley and foothill grassland with alkaline soil	Unlikely to occur; no appropriate habitat within the Plan Area.
INVERTEBRATES					
CALLIPPE SILVERSPOT BUTTERFLY <i>Speyeria callippe callippe</i>	E	-	-	native grasslands and associated habitats.	Unlikely to occur. The only two known occurrences are not within the vicinity of the Plan Area.
LONGHORN FAIRY SHRIMP <i>Branchinecta longiantenna</i>	E	-	-	vernal pools	Unlikely to occur; no appropriate habitat within the Plan Area.
VERNAL POOL FAIRY SHRIMP <i>Syncaris pacifica</i>	T	-	-	vernal pools	Unlikely to occur; no appropriate habitat within the Plan Area.
AMPHIBIANS					
CALIFORNIA TIGER SALAMANDER <i>Ambystoma californiense</i>	C	CSC	-	vernal pools, ponds, and grasslands	Appropriate habitat in ponds and upland areas within Plan Area.
CALIFORNIA RED-LEGGED FROG <i>Rana aurora draytonii</i>	T	CSC	-	deep-water ponds with overhanging or emergent vegetation	May occur, although limited habitat within the Plan Area.
REPTILES					
WESTERN POND TURTLE <i>Clemmys marmorata</i>	-	CSC	-	perennial wetlands, especially slow moving creeks and ponds with overhanging vegetation and basking sites	Unlikely to occur; no appropriate habitat within the Plan Area.
ALAMEDA WHIPSNAKE <i>Masticophis lateralis eurxanthus</i>	T	T	-	coastal scrub and chaparral	Unlikely to occur; no appropriate habitat within the Plan Area.

Table 4.4-1
Sensitive Species Potentially Occurring in The Plan Area

BIRDS					
GOLDEN EAGLE <i>Aquila chrysaetos</i>	-	CSC	-	grassland for foraging; secluded cliffs with overhanging ledges or large trees in open areas for nesting	Annual grassland represents suitable foraging habitat; however, no suitable nesting habitat within the Plan Area.
NORTHERN HARRIER <i>Circus cyaneus</i>	-	CSC	-	annual grassland and marsh	Observed within the Plan Area. Suitable nesting habitat onsite.
COOPER'S HAWK <i>Accipiter cooperii</i>	-	CSC	-	dense riparian and oak woodland	Observed within the Plan Area; however, no suitable nesting habitat.
SHARP-SHINNED HAWK <i>Accipiter striatus</i>	-	CSC	-	dense riparian and oak woodland	Potential winter visitor; however, no suitable nesting habitat.
BURROWING OWL <i>Speotyto cunicularia</i>	-	CSC	-	non-native grasslands	Unlikely to occur. Non-native grassland represents suitable foraging and breeding habitat; however, no recent observations within the Plan Area.
TRICOLORED BLACKBIRD <i>Agelaius tricolor</i>	-	CSC	-	freshwater marsh with dense cattails and tules for nesting, grasslands for foraging	No appropriate nesting habitat onsite, but non-native grasslands represent suitable foraging habitat.
MAMMALS					
TOWNSEND'S WESTERN BIG-EARED BAT <i>Plecotus townsendii</i> sp. <i>townsendii</i>	-	CSC	-	caves, crevices, or mines for roosting	No appropriate roosting habitat onsite.
PALLID BAT <i>Antrozous pallidus</i>		CSC	-	caves, crevices, or mines for roosting	No appropriate roosting habitat onsite.
CALIFORNIA MASTIFF BAT <i>Eumops perotis</i> sp. <i>californicus</i>	-	CSC	-	caves, crevices, or mines for roosting	No appropriate roosting habitat onsite.
SAN JOAQUIN KIT FOX <i>Vulpes macrotis mutica</i>	E	T	-	Annual grasslands with scattered shrubby vegetation, and loose textured sandy soils for denning.	Unlikely to occur, outside the known range for this species.

Table 4.4-1
Sensitive Species Potentially Occurring in The Plan Area

U.S. Fish and Wildlife Service (USFWS) Federal Listing Categories:

- | | |
|---|-------------------------------|
| E | Federal Endangered |
| T | Federal Threatened |
| C | Candidate for Federal Listing |

California Department of Fish and Game (CDFG) State Listing Categories:

- | | |
|-----|---------------------------------------|
| E | California Endangered |
| T | California Threatened |
| CSC | California Species of Special Concern |

California Native Plant Society (CNPS) Categories:*

- | | |
|----|---|
| 1A | Plants presumed extinct in California. |
| 1B | Plants rare, threatened, or endangered in California and elsewhere. |

- * CNPS is a private non-profit organization that works closely with CDFG throughout the state. CNPS-developed information serves as an important source of data for consideration by CDFG and USFWS in recommendations for listing State or Federal threatened and endangered plant species.

Source: EDAW 1998

The **California Red-legged frog** is federally-listed as Threatened and a California Species of Special Concern. California red-legged frog habitat is characterized by dense, shrubby riparian vegetation associated with deep, still or slow moving water (Jennings and Hayes 1994). This species usually breeds in aquatic environments dominated by arroyo willow, cattails, or bulrushes. California red-legged frog larvae requires at least four months to attain metamorphosis (Jennings and Hayes 1994). No California red-legged frogs were observed in the Plan Area during field surveys, and this species is unlikely to occur because of the lack of adequate cover and the absence of perennial open water. The seasonal wetlands onsite appear to be unsuitable breeding habitat for this species because surface water is not present for sufficient periods to allow completion of larval development. However, because red-legged frogs are known to move across uplands to reach breeding locations, the possibility that seasonal wetlands in the Plan Area could support individuals for short durations during winter and spring months cannot be entirely dismissed.

The **California tiger salamander** is a federal Candidate and a California Species of Special Concern. This species is currently under review by USFWS; therefore, it could be listed as Threatened or Endangered in the near future (C. Bean, pers. comm., 1998). This amphibian is most commonly found in annual grasslands, but also occurs in the grassy understory of valley-foothill woodland habitats. The California tiger salamander spends the dry summer months in subterranean refuge sites (e.g., small mammal burrows). Following late winter and spring rains, this species moves to deep rain pools to breed. Suitable habitat must be free of fish predators. Larvae take a minimum of 10 weeks to develop through metamorphosis (Jennings and Hayes 1994). California tiger salamanders have been reported from a number of locations in the immediate vicinity of the Plan Area (Exhibit 4.4-2), including the adjacent Ruby Hill Development site (WPM Planning Team 1994). No tiger

salamanders were observed in the Plan Area during field surveys, which included dip-net sampling in both seasonal ponds. Although this species has not been identified in the Plan Area, annual grasslands, blue oak woodland, and the two seasonal ponds are likely to be considered potential habitat by USFWS because of numerous sighting reports in the vicinity (C. Bean, pers. comm., 1998).

The **Alameda whipsnake** is federally Threatened. This species inhabits only hilly regions east of the San Francisco Bay in Alameda and Contra Costa counties. Although this snake may occur in grasslands and oak woodlands, it prefers either open coastal scrub or chaparral habitats. The Alameda whipsnake is not expected in the Plan Area because neither of the preferred habitats are present (WPM Planning Team 1994).

The **San Joaquin kit fox** is federally Endangered and state Threatened. This small canid inhabits grasslands and other sparsely vegetated, shrubby habitat which allow easy mobility and good visibility of ground-dwelling prey species (Biosystems Analysis 1994). The San Joaquin kit fox was once widely distributed in the San Joaquin Valley and in the surrounding foothills. The historic ranges included the west side of the Central Valley north to Byron and portions of the interior coast range. The Plan Area lies near the western edge of the northern portion of the historic kit fox range. However, recent studies suggest that the kit fox range in Alameda and Contra Costa County is restricted to the Altamont Hills and the western edge of the San Joaquin Valley. In Alameda County, kit fox have been sighted near Laughlin Road, east of Vasco Road (Harvey and Associates 1997). These are the most westerly confirmed sightings in Alameda County despite numerous surveys conducted in the vicinity of Livermore and Pleasanton.

Relevant General Plan Policies and Programs

- Program 1.3: Preserve and enhance the resource value of wetlands through project development design measures. These measures should be based in part on a jurisdictional wetlands delineation in accordance with current Army corps of Engineers criteria, for projects which are known to have or that may have wetlands present within their boundaries.
- Program 1.4: Develop and implement ordinances and policies that provide for the preservation of wildlife corridors, and establish mitigation requirements which minimize the barriers across wildlife corridors that roadways and developments can create.
- Policy 2: Preserve heritage trees throughout the Planning Area.
- Policy 3: Preserve and enhance stream beds and channels in a natural state, except where needed for flood and erosion control.
- Program 3.4: Design projects adjacent to the arroyos to protect habitat areas.
- Program 5.3: Encourage developers to dedicate scenic/conservation easements for private open space areas possessing exceptional natural, scenic, and/or vegetation or wildlife habitat qualities.

4.4.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Significant impacts that could occur from the project were determined from criteria that are based on the standards in the State CEQA guidelines. Appendix G of State Guidelines states that a project may be deemed to have a significant effect on the environment if it will:

- ▶ substantially affect an endangered, rare, or threatened, species of animal or plant or the habitat of the species;
- ▶ interfere substantially with the movement of any resident or migratory fish or wildlife species; or
- ▶ substantially diminish habitat for fish, wildlife, or plants.

Section 15065(a) of the CEQA Guidelines also states that a project has a significant effect on the environment when "the project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of an endangered, rare, or threatened species." Significant impacts could include those that would conflict with state or federal conservation plans, goals, or regulations.

SPECIFIC PLAN GUIDELINES

Specific Plan measures intended to reduce biological resource impacts of proposed development to less-than-significant levels are included at the end of this section.

BIOLOGICAL IMPACTS

Impact
4.4-1

General Vegetation and Wildlife. Land use and roadway improvements in the Plan Area would eliminate or disturb habitat that supports many common plant and wildlife species. Some common wildlife species would also be adversely affected by increased traffic generated by road improvements. Habitats affected in the Plan Area would include annual grassland, blue oak woodland, and agricultural land. The plant and wildlife species found in these habitat types are regionally abundant and occur throughout a large geographic region. This impact would be considered less than significant.

Implementation of the proposed project would result in the removal of some non-native grassland, blue oak woodland, and agricultural lands. This loss of habitat would reduce the local populations of some common plants and animals. After development is completed, direct mortality of wildlife would occur due to increased traffic generated by Vineyard Avenue improvements and new development.

Annual grassland, blue oak woodland, and agricultural land are regionally abundant habitat types. These habitats are also present in the lands designated as Open Space in the Plan Area. Similar habitat in the Plan Area and elsewhere in the region would be expected to accommodate most of the displaced individuals. Implementation of the proposed project would not substantially interfere with regional wildlife movement corridors because of existing mining operations to the north and urban development to the west and east of the Plan Area. Because the types of habitat and species of resident wildlife are not considered sensitive by local, state, or federal agencies, and because both the vegetation and wildlife are abundant and occur throughout a large geographic region, this impact is considered less than significant.

Impact
4.4-2

Heritage Trees. Implementation of the proposed project could result in the removal of up to 75 trees which qualify as Heritage Trees under the City of Pleasanton's Tree Ordinance. This would be considered a potentially significant impact.

Implementation of the proposed project could result in the loss of up to 75 trees that qualify as Heritage Trees, including 9 blue oaks, 3 valley oaks, 47 eucalyptus, and 16 coast live oaks. Although oak woodland is not afforded special protection under state or federal law, loss of oak woodland is a concern of CDFG and CNPS because of its continued decline from encroaching urban development. This habitat is an important natural resource because it provides food and shelter for many wildlife species. Oak woodland also protects watersheds by stabilizing soils on hillsides. Many of the trees found in the oak woodland onsite would qualify as "Heritage Trees" (pursuant to the City of Pleasanton's Tree Ordinance). Removal of trees classified as Heritage Trees would be a potentially significant impact.

Impact
4.4-3

Raptor Nest Disturbance. Implementation of the proposed project could result in disturbance of active raptor nests, which are protected under State Fish and Game Code (Section 3503.5). This would be considered a potentially significant impact.

Mature trees located on the site could be used for nesting by red-tailed hawks, red-shouldered hawks, and other raptors. Grasslands onsite could be used for nesting by northern harrier and burrowing owl. The removal or destruction of active raptor nests is considered a violation of the California Fish and Game Code. Although no nests were identified on the Plan Area during field surveys, the site contains sufficient habitat to assume nesting does occur on the site. In addition, an active raptor nest was identified on Lot 3 by a resident of the Plan Area following completion of the field surveys. This impact is considered potentially significant.

Impact
4.4-4

Wetlands and other Jurisdictional Waters of the United States. Implementation of the proposed project could result in fill of jurisdictional wetlands. Jurisdictional wetlands are considered a sensitive habitat and regulated by USACE. This impact would be considered potentially significant.

Implementation of the proposed project could result in the loss of jurisdictional wetlands, a habitat of special concern that is subject to state and federal regulation. Wetlands may provide habitat for a

variety of sensitive plant and wildlife species and are in decline, both regionally and statewide. Wetlands affected in the Plan Area would be restricted to road crossings over intermittent drainages. The majority of the wetlands would be preserved on the site; however, any loss of jurisdictional wetlands would be considered potentially significant.

Impact
4.4-5

California Red-legged Frog. Implementation of the proposed project could result in loss of suitable California red-legged frog habitat. This impact would be considered potentially significant.

Potentially suitable habitat for California red-legged frog includes riparian and emergent marsh habitat adjacent to permanent ponds or slow-moving streams. Red-legged frogs may occur temporarily in intermittent creeks, seasonal ponds, and upland habitats near occupied wetlands. In the Plan Area, seasonal ponds and intermittent drainages could temporarily support populations of red-legged frogs, but these areas do not appear to contain surface water for sufficient durations to be considered suitable breeding habitat. Although red-legged frogs were not observed during fields surveys, the Plan Area is within the current distributional range of the species (J. Little, pers. comm. 1998). The loss of red-legged frog habitat would be considered a potentially significant impact.

Impact
4.4-6

California Tiger Salamander. Implementation of the proposed project could result in the loss of suitable upland habitat for the California tiger salamander. The loss of potential tiger salamander habitat would be considered a potentially significant impact.

The California tiger salamander is a Candidate for federal listing and a California Species of Special Concern. Although the two seasonal ponds in the Plan Area are considered potential breeding habitat, these ponds would not be affected by the proposed development. No tiger salamanders were found in either pond during field surveys. Blue oak woodland and annual grassland habitats could support California tiger salamanders during summer months when this species retreats underground. Because tiger salamanders could be harmed during construction, this impact is potentially significant.

Impact
4.4-7

Other Special-status Species. In addition to California red-legged frog and California tiger salamander, a number of special-status species are known to occur in Alameda County, including the Alameda whipsnake and the San Joaquin kit fox. The proposed project is not expected to result in a substantial loss of habitat for any of these species. This impact would be considered less-than-significant.

In addition to California tiger salamander and California red-legged frog, two listed special-status animal species were identified as potentially occurring in the Plan Area: San Joaquin kit fox and Alameda whipsnake. The San Joaquin kit fox, which is federally Endangered and state Threatened, inhabits grasslands such as those which are present in the Plan Area. However, all recent and historical sighting of kit fox in Alameda County are from locations east of the Plan Area. The Plan Area is also within the range of the federally-listed Threatened Alameda whipsnake. However, the whipsnake is not expected to occur onsite because it requires chaparral or coastal scrub habitat; neither of these habitats are present in the Plan Area. A number of California Species of Special Concern and other

special-status species have also been identified in the vicinity of the Plan Area. However, the Plan Area is not expected to provide important breeding or nesting habitat for any of these species.

Impact
4.4-8

Arroyo del Valle. Implementation of the proposed project could adversely affect riparian habitat along the Arroyo del Valle. Riparian habitat is of special concern to CDFG, USFWS, and other resources agencies. This would be considered a potentially significant impact.

Implementation of the proposed project could adversely affect riparian habitat along the Arroyo del Valle. Riparian habitat is considered one of the most important habitat types in California because it supports a diversity of wildlife species, many of which are considered rare or uncommon. Riparian woodland provides important nesting habitat for many migratory and resident birds.

During the last century, riparian habitat has declined substantially, both regionally and statewide. The continued decline due to urban and agricultural development, as well as flood control modifications, is a concern to CDFG, USFWS, and other resource agencies. Removal or adverse impacts to this habitat would be a potentially significant impact.

4.4.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development in the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.4-2
mitigation

Heritage Trees

Prior to issuance of a grading permit, all development applicants shall submit a tree survey to the City of Pleasanton Planning Department for approval. The tree survey shall note all trees to be removed or disturbed that are 6 inches in diameter or greater and shall specify the precise location of trunk and dripline, size, health and species of all existing trees with special notation of those classified as Heritage Trees.

Heritage Trees not approved for removal that are within 200 feet of grading activity shall be protectively fenced at or beyond the dripline of each heritage tree (as determined by a certified arborist). This fence, which is meant to prevent activities that result in soil compaction beneath the canopy cover or over the root zone, shall be maintained until construction activities are completed. No grading, trenching, or movement of construction equipment shall be allowed to occur within fenced areas. Protection of Heritage Trees on slopes and hillsides will additionally include installation of a silt fence at the upslope base of the protective fence to prevent any soil from drifting down over the root zone.

Heritage Trees that are removed shall be replaced “inch for inch” (e.g. removal of a 16-inch tree may be replaced by 16 one-inch saplings or two 8-inch saplings, etc.), or by planting three times the number of individual trees lost, or a combination of both of these measures.

Raptor Nest Disturbance

When grading of an area of one acre or greater is to occur, or when one or more trees with a trunk diameter of 6 inches or greater are proposed to be removed during the raptor nesting season (February 1 to August 31), a focused survey for raptor nests shall be conducted by a qualified biologist during the nesting season. The survey shall be conducted no less than 14 days, and no more than 30 days, prior to the beginning of grading or tree removal. If nesting raptors are found during the focused survey, no grading or tree removal shall occur within 500 feet of an active nest until the young have fledged (as determined by a qualified biologist), or until the project applicant receives written authorization from CDFG to proceed. If the removal of nest trees is unavoidable, they shall be removed during the non-breeding season.

Wetland and Other Jurisdictional Waters of the United States

All grading plans shall include a minimum 100-foot setback from intermittent drainages and other seasonal wetlands that are not identified for development in the Specific Plan. The wetlands identified for development in the Specific Plan include the northern portion of the western-most drainage from approximately 300 feet south of the existing alignment of Vineyard Avenue to Arroyo del Valle to accommodate road crossings and residential development on Lots 18 and 22, the northern portion of the central drainage from the existing alignment of Vineyard Avenue to Arroyo del Valle to accommodate the proposed school on Lots 18 and 19, a 300-foot section of the eastern drainage south of the existing alignment of Vineyard Avenue to accommodate residential development on Lot 27, a 60-foot section of the eastern drainage near the Plan Area's northern boundary to accommodate the realigned Vineyard Avenue crossing, and the majority of the eastern-most drainage that ends in a seep south of the existing alignment of Vineyard Avenue on Lot 28 to accommodate residential development.

Measures to minimize erosion and runoff into seasonal drainages shall also be included in all grading plans. Appropriate runoff controls such as berms, storm gates, detention basins, overflow collection areas, filtration systems, and sediment traps shall be implemented to control siltation and the potential discharge of pollutants into preserved drainages.

Prior to issuance of grading permits for Lots 18, 19, 21, 22, 24, 26, 27, 28, 32, and 33, a qualified biologist shall determine, through the formal Section 404 wetlands delineation process, the extent of jurisdictional wetlands on each lot. Authorization of a Section 404 permit shall be secured from USACE and a Section 1603 agreement shall be secured from CDFG, if applicable. As part of the permitting process, mitigation of impacts to jurisdictional wetlands shall be identified and implemented. The acreage shall be replaced or rehabilitated on a "no-net-loss" basis in accordance with USACE regulations. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods agreeable to USACE.

impact
4.4-5
mitigation

California Red-legged Frog

All grading plans will include a minimum 100-foot setback from seasonal ponds that are not identified for development in the Specific Plan. (Mitigation Measure 4.4-4 identifies all wetlands that would be disturbed with site development and Exhibit 4.4-1 identifies the seasonal ponds on the project site.)

Construction activity occurring within 100 feet of an intermittent drainage, may occur only if the drainage is completely dry.

Mitigation Measure 4.4-4 shall be implemented to reduce impacts on California red-legged frog habitat.

impact
4.4-6
mitigation

California Tiger Salamander

All grading plans will include a minimum 100-foot setback from suitable California tiger salamander breeding habitat (i.e., seasonal ponds) that is not identified for development in the Specific Plan. (Mitigation Measure 4.4-4 identifies all wetlands that would be disturbed with site development and Exhibit 4.4-1 identifies the seasonal ponds on the project site.)

For the upland habitat of the California tiger salamander that would be removed with development of the proposed project, an equivalent amount of upland habitat shall be preserved within the Plan Area. Suitable tiger salamander habitat in the Plan Area includes all areas identified as blue oak woodland or annual grassland. The preserved habitat shall consist entirely of blue oak woodland or annual grassland habitat. All preserved habitat shall be managed and protected, in perpetuity, as natural habitat.

Mitigation Measure 4.4-4 shall be implemented to reduce impacts on California tiger salamander habitat.

impact
4.4-8
mitigation

Arroyo del Valle

To protect the riparian habitat associated with the Arroyo del Valle, a 100-foot setback shall generally be established from the top of the south bank of the Arroyo del Valle. No development or construction activities other than trails shall be allowed within the setback area. Construction project fencing shall be placed at the outer edge of the setback area. The fencing shall be maintained until all construction activities are completed.

4.4.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

4.4.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the Specific Plan measures would reduce biological resources impacts to less-than-significant levels.

4.5 NOISE

The following noise assessment analyzes future noise impacts to adjacent noise-sensitive receptors due to project construction and other ongoing activities, as well as anticipated vehicular traffic increases along affected local roadways.

4.5.1 EXISTING CONDITIONS

ACOUSTIC FUNDAMENTALS

Noise is often defined as unwanted sound. Sound is a mechanical form of radiant energy transmitted by pressure waves in the air. It is characterized by two parameters: amplitude (loudness) and frequency (tone).

Amplitude

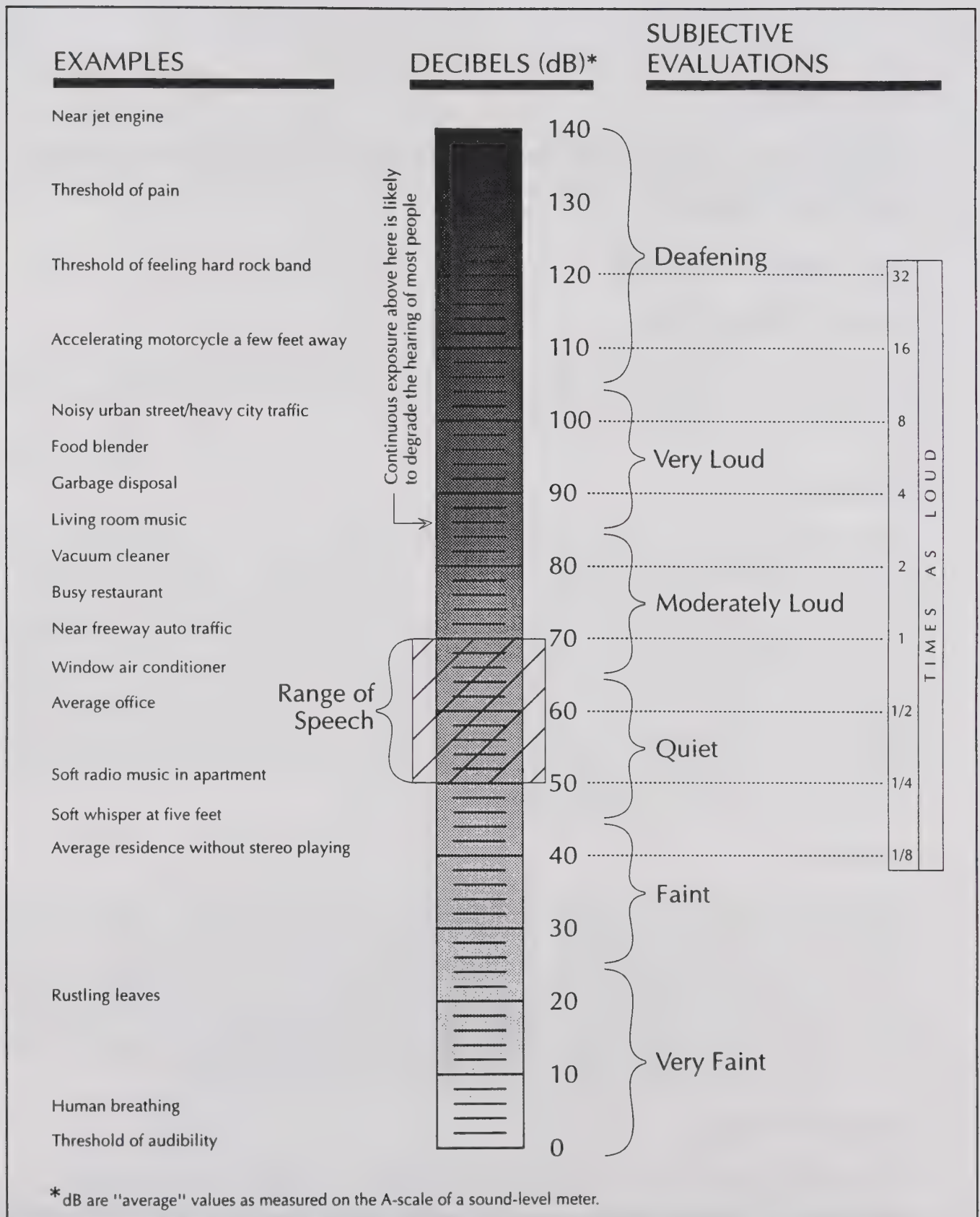
Amplitude is the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. For example, a 20 dB sound is 10 times the pressure difference of a 10 dB sound; a 30 dB sound is 100 times the pressure difference of a 10 dB sound. Another feature of the decibel scale is the way in which sound amplitudes from multiple sources add together. A 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person (Federal Highway Administration 1982).

Frequency

Frequency is the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. Sound waves below 16 Hz or above 20,000 Hz cannot be heard at all, and the ear is more sensitive to sound in the higher portion of this range than in the lower. To approximate this sensitivity, environmental sound is usually measured in A-weighted decibels (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA. Listed in Exhibit 4.5-1 are several examples of the noise levels associated with common situations.

NOISE DESCRIPTORS

The intensity of environmental noise fluctuates over time and several descriptors of time-averaged noise levels are used. Three most commonly used descriptors are energy equivalent noise level, day-night average noise level, and the community equivalent noise level. The energy equivalent noise level, L_{eq} , is a measure of the average energy content (intensity) of noise over any given period of time. Many communities use 24-hour descriptors of noise levels to regulate noise. The day-night average noise level, L_{dn} , is the 24-hour average of the noise intensity, with a 10 dBA "penalty" added for nighttime



Source: *Concepts in Architectural Acoustics*: M.David Egan, McGraw Hill, 1972 and U.S. Department of Housing and Urban Development, Office of Community Planning and Development "The Noise Guidebook").

noise (10:00 PM to 7:00 AM) to account for the greater sensitivity to noise during this period (California Code of Regulations 1988). CNEL, the community equivalent noise level, is similar to L_{dn} , but adds an additional 5 dBA penalty to evening noise (7:00 PM to 10:00 PM).

CHARACTERISTICS OF SOUND PROPAGATION AND ATTENUATION

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates at a rate between 3.0 to 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuate at a rate between 6.0 to about 7.5 dBA per doubling of distance.

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers.

HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks demanding concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

EXISTING NOISE SOURCES

The existing noise environment in the Plan Area is primarily influenced by noise associated with activities conducted at the RMC Lonestar gravel processing plant and gravel harvesting operations. The RMC Lonestar gravel processing plant is a stationary noise source located approximately 2,000 feet north of the Plan Area, near the Arroyo del Valle. Although the plant is currently permitted to operate 24 hours/day, gravel processing activities typically occur between the hours of 5:30 a.m. and 12:30 p.m. Gravel harvesting operations occur at varying locations along the Arroyo del Valle. Noise generated during harvesting and processing operations is primarily associated with the operation of extraction, transport, and material handling equipment (WPM 1994).

While the major noise source in the area is associated with gravel harvesting and processing activities, additional noise sources affecting the Plan Area include noise from vehicles traveling on Vineyard Avenue. The level of vehicular noise generally varies according to the volume of traffic, the percentage of trucks, the speed of traffic and the distance from the source. The existing 65 dBA L_{dn} noise contour for Vineyard Avenue ranges from 27 feet from the centerline of the roadway near Ruby Hill Boulevard to 160 feet from the centerline of the roadway just east of Bernal Avenue (City of Pleasanton, 1996).

NOISE REGULATIONS AND GUIDELINES

A number of government agencies have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise.

State of California

Title 24 of the California Code of Regulations establishes standards governing interior noise levels that apply to all new multifamily residential units in California. These standards require that acoustical studies be performed prior to construction at building locations where the existing L_{dn} exceeds 60 dBA. Such acoustical studies are required to establish mitigation measures that will limit maximum L_{dn} levels to 45 dBA in any inhabitable room. Although there are no generally applicable interior noise standards pertinent to all uses, many communities in California have adopted an L_{dn} of 45 as an upper limit on interior noise in all residential units.

Relevant General Plan Policies and Programs

The City of Pleasanton General Plan Noise Element provides standards and programs to avoid noise-related impacts from existing uses and new developments. The General Plan aims to “reduce noise to acceptable levels throughout the community” (Goal 1, Noise Element) by (1) requiring new development to meet acceptable exterior noise level standards (Policy 1, Noise Element), (2) by ensuring that interior noise levels do not exceed 45 dBA L_{dn} for residential uses (Policy 3, Noise Element); and (3) by controlling noise at its source to maintain existing noise levels (Policy 4, Noise Element). The exterior noise level standard of 60 dBA L_{dn} is generally to be attained through on-site noise mitigation measures for new residential projects (Program 1.2), through installing feasible mitigation measures in existing areas of excessive noise (Program 2.1), and by designing street patterns to not exceed 6,000-9,000 vehicles/day on residential local and collector streets (Program 7.2) as the City grows (City of Pleasanton, September 1996).

Exhibit 4.5-2 presents the City of Pleasanton Land Use Compatibility For Community Noise Environments. As indicated, the acceptable exterior noise exposure level for the City of Pleasanton is 60 L_{dn} for residential, school, hotel, and motel land uses, or 65 dBA L_{dn} where outdoor use is not a major consideration, and 65 L_{dn} for outdoor recreation areas. The General Plan noise standards have been established so that the noise level in the active open space areas of residential neighborhoods (the rear yards in detached single-family homes and recreation areas in multi-family housing developments) is at or below 60 dBA L_{dn} and the interior living area is at or below 45 dBA L_{dn} .

LAND USE CATEGORY	EXTERIOR NOISE EXPOSURE L _{dn} or CNEL dB							
	50	55	60	65	70	75	80	85
Residential, Hotels, and Motels								
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds								
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches								
Office Buildings, Business Commercial, and Professional								
Auditoriums, Concert Halls, Amphitheaters								
Industrial, Manufacturing, Utilities, and Agriculture								



Normally Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal convention construction, without any special insulation requirements.



Conditionally Acceptable - Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.



Unacceptable - New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Source: Pleasanton General Plan, 1996.

In addition, community concern was expressed during the 1996 General Plan update over the negative visual impact associated with the use of soundwalls to mitigate vehicular traffic noise. As a result, the existing City programs that call for the installation of noise mitigation measures, primarily soundwalls, were modified to encourage the use of greater building setbacks, earth berms, and other non-soundwall design solutions. While these techniques can work for new developments, quite often soundwalls are the only available option for existing homes due to physical space constraints (City of Pleasanton, September 1996).

The City of Pleasanton has also adopted a Noise Ordinance that regulates the level of noise emanating from residential, commercial, and industrial activities. In general, the City Noise Ordinance specifies a noise limit of 60 dBA in the vicinity of noise-sensitive land uses and 70 dBA for commercial land uses that are not located near noise-sensitive receptors (Pleasanton, 1989). The City Noise Ordinance allows general noise-generating construction activities between the hours of 8 a.m. and 8 p.m. Monday through Saturday, and 10 a.m. to 6 p.m. on Sundays and holidays. The City currently restricts noise-generating construction activities occurring within noise sensitive areas to between the hours of 8 a.m. and 5 p.m. Monday through Saturday (Plucker, pers. comm., 1998).

4.5.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines states that a project may be deemed to have a significant effect on the environment if it increases substantially the ambient noise levels for adjoining areas. For the purposes of this analysis, significant noise impacts are measured as follows:

Construction Noise Impacts. Project impacts would be considered significant if construction activities occur between the hours of 5:00 p.m. and 8:00 a.m., Monday through Saturday in accordance with the City of Pleasanton standard construction requirements.

Stationary Source Noise Impacts. Project impacts would be considered significant if noise levels generated by intermittent stationary noise sources exceed 60 dBA at sensitive receptors, or 65 dBA where outdoor use is not a major consideration (including residential dwellings, schools, and hotels) and 65 dBA at outdoor recreation areas or if noise levels increase by 3 dBA or more.

Vehicular Traffic Noise Impacts. Project impacts would be considered significant if noise levels generated by vehicle traffic exceed 60 L_{dn} at sensitive receptors, or 65 dBA where outdoor use is not a major consideration (including residential dwellings, schools, and hotels) and 65 dBA (L_{dn}) at outdoor recreation areas or if noise levels increase by 3 dBA or more.

SPECIFIC PLAN GUIDELINES

The Specific Plan includes guidelines for the design of buildings within the Plan Area to minimize noise levels. In addition, measures are included in the Plan that are intended to reduce potential noise impacts to less-than-significant levels. These measures are included at the end of this section.

CONSTRUCTION IMPACTS

Impact 4.5-1

Noise from Construction Activities. Construction activities within the Specific Plan Area would generate intermittent and temporary increases in noise. Noise sensitive land uses may be subjected to intermittent noise levels in excess of the City's exterior noise standards. As a result, the generation of construction noise would be considered a potentially significant impact.

The Vineyard Avenue Corridor Specific Plan land use concept features a mix of single-family homes, vineyards, open space, a community park, and an elementary school. In addition, the Specific Plan provides for the realignment of Vineyard Avenue and the option to develop a 100-room inn/spa/restaurant/conference facility, as well as small bed-and-breakfast facilities. Construction activities associated with the development of these land uses would involve several noise-generating activities.

Construction noise represents a short-term impact on ambient noise levels on and around the site over the entire period of project construction. Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. The U.S. Environmental Protection Agency has found that the noisiest equipment types operating at construction sites typically range from 88 dBA to 91 dBA at 50 feet. If pile driving during building foundation work occurs, it would constitute the loudest construction activity. Pile driving typically generates noise levels up to 96 dBA when measured at 50 feet. Typical operating cycles of various construction equipment may involve 2 minutes of full power, followed by 3 or 4 minutes at lower settings (USEPA 1971). Table 4.5-1 lists noise levels generated by typical construction equipment at a distance of 50 feet.

Table 4.5-1 Typical Construction Equipment Sound Levels	
Equipment	Typical Sound Level @ 50 Ft (in dBA)
Dump truck	88
Portable air compressor	81
Concrete mixer (truck)	85
Jackhammer	88
Scraper	88
Dozer	87
Paver	89
Generator	76
Pile driver	96
Pump	76
Pneumatic tools	85
Backhoe	85

Because noise from localized point sources (such as construction) typically falls off by about 6 dBA with each doubling of distance from source to receptor, noise-sensitive receptors located within 100 feet of construction areas would experience intermittent noise levels greater than 85 dBA when onsite

construction noise exceeds 91 dBA. If pile driving is used during construction, noise levels at these receptors could approach 91 dBA, intermittently. As a result, construction noise could cause short-term significant impacts to nearby noise-sensitive receptors. This would be considered a potentially significant impact.

Impact
4.5-2

Stationary Source Noise Generated by Development. Noise generated by residential land uses would increase with site development. Noise level increases would also be anticipated with the school, park and potential commercial land uses. Because these increased noise levels would not be expected to exceed the City's threshold of 60 dBA L_{dn} , significant impacts would not be anticipated.

As previously mentioned, the Vineyard Avenue Corridor Specific Plan land use concept features a mix of single-family homes, vineyards, open space, a community park, and an elementary school. In addition, the Specific Plan provides for the realignment of Vineyard Avenue and the option to develop a 100-room inn/spa/restaurant/conference facility, as well as small bed-and-breakfast facilities.

Occupation of the proposed residential dwellings and vineyards would expose nearby residences to minor stationary source noises. Noise typically associated with residential development includes amplified music, human voices, noise generated by various recreational activities, and lawn maintenance equipment. The proposed vineyards would generate minor noise levels on an intermittent basis primarily associated with the on-site operation of agricultural use equipment (i.e., tractors, trucks, etc.). Activities associated with these land uses would produce noise levels primarily during the day and early evening hours and less frequently at night. Noise levels are expected to increase above ambient levels but not enough to exceed the City's noise threshold of 60 dBA L_{dn} .

Noise associated with the proposed 20-acre park would be generated by various recreational activities, motor vehicles accessing the park, and the maintenance of park facilities. The proposed park may include picnic areas and sports fields, for baseball or softball, soccer, and other team and individual activities. In addition, passive recreational activities such as biking and walking would also occur. These passive and active recreational activities would expose nearby residences to increases in ambient noise levels. Park facilities maintenance equipment including lawn mowers, tillers and sprayers would also increase noise levels at nearby residences. Mowing equipment would typically occur once a week and would produce irregular sound levels due to fairly rapid movement and limited time exposure relative to any particular portion of the proposed park. Consequently, the amount of time maintenance equipment would be in close proximity to the nearest residences would be minimal. Furthermore, noise associated with park activities would typically occur during daytime hours only as no sports field lighting is proposed and maintenance activities would occur during regularly scheduled working hours for City maintenance crews. Other related noise sources, such as normal conversations would be similar to those occurring in backyards.

Likewise, operation of a 650-student elementary school, an optional 100-room inn, (including a spa, restaurant, and conference facility), and possible bed-and-breakfast facilities would generate minor increases in noise generated from human voices, motor vehicles, and various recreational activities conducted at the elementary school. In addition, mechanical noise associated with the operation of the

ventilation equipment required to service these facilities could increase noise levels depending on the type of equipment and extent of use (hours of operation). Mechanical noise from ventilation equipment at these land uses is not anticipated to exceed the City's exterior noise threshold of 60 dBA L_{dn} at nearby existing and planned residential land uses. Onsite stationary noise associated with site development would be considered less than significant.

Impact
4.5-3

Noise Effects of Gravel Processing Operations. Noise-sensitive land uses would be exposed to noise levels from the existing gravel processing operations that would exceed the City's standards. This impact would be considered potentially significant.

The RMC Lonestar gravel processing plant is a stationary noise source located north of the project site. It consists of a large number of individual noise sources and typically operates between 5:30 a.m. and 12:30 a.m. The gravel processing plant noise can potentially be heard from all areas of the project site. Noise levels associated with the operation of the gravel processing plant have been estimated at between approximately 50 to 56 dBA (L_{eq}) along the northern boundary of the Plan Area, near the edge of the Arroyo del Valle (WPM 1994).

Because continuous noise levels generated by industrial operations, such as the gravel processing plant, are generally perceived to be more intrusive than intermittent and temporary noise levels, noise standards applied to primary sources of continuous noise often need to be reduced by 5 dBA. Reduction of the City's exterior noise standards by 5 dBA to account for continuous noise generated by the gravel processing plant would result in a noise threshold of 55 dBA for residential, school, and hotel land uses and 60 dBA for outdoor recreation areas. As a result, operational noise levels would likely exceed the reduced threshold of 55 dBA at the property line of residential land uses located along the project's northern boundary. Noise levels at the proposed residential land uses along Arroyo del Valle generated by gravel processing operations would be considered potentially significant.

Impact
4.5-4

Noise Effects of Gravel Harvesting Operations. Noise-sensitive land uses would be exposed to noise from gravel harvesting operations in excess of the City's exterior noise standard. This impact would be considered significant and unavoidable.

Noise-generating equipment used during gravel harvesting operations typically includes bulldozers, front-end loaders, and transport trucks. Based on the findings of a noise study prepared on behalf of RMC Lonestar by Consultants in Engineering Acoustics (1992), noise levels associated with the simultaneous operation of gravel harvesting equipment were found to be 70 dBA at 510 feet, assuming no shielding from existing structures or topographic features. The approximate distances to noise contours from the equivalent (effective) center of the harvesting operation are presented in Table 4.5-2 and represent the maximum noise levels typically generated during day-time operations. Night-time gravel harvesting operations were estimated at approximately 64 dBA at 510 feet, and assume the simultaneous operation of a conveyor and loader. Based on these predicted noise levels, the distance to the 60 dBA noise contour, the City's exterior noise standard for sensitive receptors, would be approximately 1,500 feet (WPM 1994). The noise level standard would not be reduced by 5 dBA in this case because the harvesting operations would not be considered a stationary source.

Table 4.5-2 Noise Levels Generated During Gravel Harvesting Operations	
Noise Level Contours dBA (L_{eq})	Distance (feet)
70	510
65	900
60	1,500
55	2,500
50	3,500
45	5,200
<i>Source: WPM 1994</i>	

The current gravel harvesting operations are located northwest of the project site and are inaudible, primarily because of the predominance of the gravel processing plant noise. The next major location of gravel harvesting is expected to occur east of Isabel Avenue (WPM 1994). However, gravel harvesting may occur at any point in the Arroyo del Valle as well as on the lot owned by RMC Lonestar within the northeastern portion of the Plan Area (Lot 21).

Nearby noise-sensitive land uses potentially affected by harvesting operations include existing and proposed residential dwellings located along the northern boundary of the project area, as well as the proposed elementary school, park, and commercial land uses (100-room inn and possible bed-

and-breakfast facilities). Noise levels from gravel harvesting operations would likely exceed the City's noise standards for these noise-sensitive land uses, depending on their proximity to the operations. Based on the noise levels presented in Table 4.5-2, excavation activities on the RMC Lonestar lot located within the Plan Area would result in noise levels in excess of the City's exterior noise standard of 60 dBA for noise sensitive land uses located within approximately 1,500 feet of the site. In addition, ground vibration generated during heavy equipment operation associated with mining operations could be a potential nuisance for local residents. These impacts would be considered significant and unavoidable.

Impact
4.5-5

Traffic Noise Effects. Noise-sensitive land uses located along the proposed Vineyard Avenue re-alignment could be exposed to traffic noise levels in excess of the City's exterior noise standards. Consequently, traffic noise would be considered a potentially significant impact to these noise-sensitive receptors.

The noise environment in the vicinity of the project site is determined primarily by traffic on adjacent roadways. To predict the increase in noise for project-related traffic, existing traffic noise levels were calculated for traffic along roadway segments in the project study area with the Federal Highway Administration's Highway Noise Prediction Model. Model input data included average daily traffic levels, day/night percentages of autos, medium and heavy trucks, vehicle speeds, ground attenuation factors, and roadway widths. Table 4.5-3 lists the calculated noise levels from the centerline of the near vehicle travel lane for various segments of Vineyard Avenue located in the vicinity of the Plan Area. The roadway noise levels presented assume no natural or man-made shielding between the roadway and the noise receptor.

Traffic noise levels attributed to the proposed project were calculated based on a comparison of future traffic generated noise levels with and without development of the Plan Area. Traffic noise levels were calculated for existing conditions and for both short-term and long-term future land use scenarios. The short-term development scenario assumes existing conditions plus future traffic from all approved but unbuilt or unoccupied development in the City of Pleasanton plus project-generated traffic associated with the complete buildout of the Plan Area. The long-term development scenario assumes future traffic associated with buildout of the City (in accordance with the current General Plan) plus buildout of the Plan Area. In addition, two development scenarios are presented for both the short-term and long-term periods assuming development of the Plan Area with and without commercial land uses.

For the most part, increased traffic along Vineyard Avenue associated with the implementation of the proposed project would result in short-term and long-term noise level increases of less than 1 dBA, both with and without development of the proposed commercial land uses. Within the project area, projected traffic noise levels along Vineyard Avenue could reach 65 dBA L_{dn} at a distance of 62 feet from the centerline of the nearest vehicle travel lane and 60 dBA L_{dn} at 132 feet from the travel lane centerline. As a result, the proposed bed-and-breakfast facility and residential dwellings located within approximately 132 feet of the travel lane centerline would be exposed to noise levels in excess of the City's exterior noise standard of 60 dBA L_{dn} for sensitive receptors. Traffic noise levels at the proposed community park, as well as the exterior recreational use areas of the proposed elementary school would also exceed the City's noise standard of 65 dBA L_{dn} for outdoor activity areas at the northern-most portions of these sites. Traffic noise levels at the proposed elementary school buildings and 100-unit inn would not exceed the City's exterior noise standard of 60 dBA L_{dn} for sensitive receptors.

Offsite traffic along Vineyard Avenue would result in increased short term and long term noise levels ranging from less than 1 dBA near Bernal Avenue to approximately 1.2 dBA near Montevino Drive both with and without development of the proposed commercial uses. Projected traffic noise levels along this portion of Vineyard Avenue could reach 65 dBA at 64.5 feet from the near travel lane centerline with the proposed commercial development and 60 dBA at 133.1 feet from near travel lane centerline. Residences and other sensitive receptors located along this portion of Vineyard Avenue would be exposed to noise levels in excess of the City's exterior noise levels standards. However, noise levels for these residents is currently in excess of the City's standards and would not noticeably change with an increase of 1.2 dBA. Changes of less than 3 dBA are not noticeable to the human ear. For these reasons, this impact would be considered less than significant.

Although the proposed project would not result in a significant increase in projected traffic noise levels, noise-sensitive land uses located along the proposed Vineyard Avenue re-alignment could be exposed to traffic noise levels in excess of the City's exterior noise standards. Consequently, traffic noise would be considered a potentially significant impact to these noise-sensitive receptors.

The placement of soundwalls along Vineyard Avenue west of the project site would not generally be considered an effective means for reducing traffic noise because of the variability in the elevations of the homes in this area. Soundwalls are the most effective when they are located at the same elevation as the property they are intended to protect and when they are as close as possible to either the area they are intended to serve or the noise source. When a home is higher than, or too far away from, the soundwall, it typically cannot effectively block the generated noise. Because of the variability in area

topography and the conclusion that project traffic noise would not significantly increase with development of the proposed project, the use of soundwalls to reduce existing traffic noise levels to below the City's noise standards is not proposed as part of the Vineyard Avenue Corridor Specific Plan along Vineyard Avenue west of the project site.

4.5.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.5-1
mitigation

Noise from Construction Activities in the Specific Plan Area

Construction of housing, roads, other infrastructure, and other site improvements shall be limited to the hours of 8:00 a.m. to 5:00 p.m., Monday through Saturday.

impact
4.5-3
mitigation

Noise Effects of Gravel Processing Operations

All new two-story homes constructed less than 140 feet from the centerline of the realigned Vineyard Avenue, and all new homes where projected noise levels exceed an L_{dn} of 55 dBA (Lots 8, 9, 13, 15, 18, 19, 20, 21, 26, 27 and 28) shall be constructed with a fresh-air ventilation and/or air conditioning system that allows residents to maintain closed windows for noise and dust control. All windows facing the RMC Lonestar plant shall be dual-paned. Other Mitigation Measure may also be necessary depending upon the locations of homes (i.e., berms, landscaping, dual siting strategies).

All new homes located on Lots where projected noise levels exceed an L_{dn} of 55 dBA (Lots 8, 9, 13, 15, 18, 19, 20, 21, 26, 27 and 28) shall be designed to locate sensitive outdoor recreation areas on the south side of the homes, wherever possible.

The recorded deed of sale for all lots (Lots 8, 9, 13, 15, 18, 19, 20, 21, 26, 27 and 28) potentially subject to noise levels in excess of an L_{dn} of 55 dBA shall include a clause which states that the property is in an area subject to excessive noise, dust, and vibration levels from gravel harvesting and processing and that the City of Pleasanton is not liable for possible damages due to such impacts.

impact
4.5-4
mitigation

Noise Effects of Gravel Harvesting Operations

Specific Plan measure 4.5-3 (above) shall be implemented to also minimize noise levels on the project site from offsite gravel harvesting operations.

Traffic Noise Effects

- ▶ A minimum six-foot high landscaped earth berm shall be constructed along the Vineyard Avenue frontage of Lots 4, 9, 10, 11, and 13 (and Lot 8, if desired by the owner of this developed parcel) , and a decorative masonry soundwall and landscaping shall be constructed along the Vineyard Avenue frontage of Lot 1 and be designed to complement the existing soundwall and landscaping on the north side of Vineyard Avenue.
- ▶ All new two-story homes constructed less than 140 feet from the centerline of the re-aligned of Vineyard Avenue shall have a fresh air ventilation and/or air conditioning system to allow residents to maintain closed windows for noise control.
- ▶ Potential bed and breakfast inn facilities shall be designed to ensure that interior noise levels of the occupied rooms are less than 45 dBA L_{dn} . Dual-paned windows shall be required for all rooms with a view of Vineyard Avenue. Because windows must remain closed to obtain the required noise reduction, mechanical ventilation (e.g., air conditioning) shall be provided for all rooms. A Title 24 analysis shall be required during the design phase to determine the potential need for additional noise control measures.

4.5.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures are available to reduce noise impacts to less-than-significant levels.

4.5.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the Specific Plan measures, noise impacts associated with potential future gravel harvesting operations would remain significant and unavoidable even with implementation of the identified mitigation measures. All other noise impacts would be reduced to less-than-significant levels.

4.6 AIR QUALITY

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, together with the current regulatory structure that applies to the Bay Area Air Basin pursuant to the regulatory authority of the Bay Area Air Quality Management District (BAAQMD).

4.6.1 EXISTING CONDITIONS

CLIMATE AND METEOROLOGY

Ambient air quality is commonly characterized by climatological conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The following section describes pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Pleasanton area.

Regional Climate

The project site is located in the Livermore-Amador Valley, which is situated in the western portion of the Bay Area Air Basin (basin). The basin is characterized by a complex terrain consisting of coastal mountain ranges, inland valleys, and the San Francisco Bay. The basin is generally bounded on the west by the Pacific Ocean, on the north by the Coast Ranges, and on the east and south by the Diablo Range. The Basin encompasses all of Marin, Napa, Contra Costa, Alameda, Santa Clara, San Mateo, San Francisco, and parts of Sonoma and Solano counties.

The basin climate is dominated by the strength and location of a semipermanent, subtropical high-pressure cell over the northeastern Pacific Ocean. Climate is also affected by the moderating effects of the adjacent oceanic heat reservoir. Mild summers and winters, moderate rainfall, daytime onshore breezes, and moderate humidities characterize regional climatic conditions. In summer, when the high pressure cell is strongest and farthest north, fog forms in the morning and temperatures are mild. In winter, when the high pressure cell is weakest and farthest south, occasional rain storms occur.

Moderate temperatures and humidities characterize the project area where temperatures average 57 degrees Fahrenheit (F) annually at the Livermore climatological station, the closest station that measures temperature and precipitation (NOAA 1992). Average daytime high temperatures range from 89.8 degrees F in July to 56.6 degrees F in December. Average overnight low temperatures range from 53.4 degrees F in July to 35.5 degrees F in January. Precipitation varies greatly in the project area, depending on season. Rainfall averages approximately 16 inches annually and occurs almost exclusively from October through April. Summers are mild and relatively dry with 3 to 4 months without rain. Winters are mild and intermittently rainy.

Winds across the study area are an important meteorological parameter because they control the dilution of locally-generated air pollutant emissions and their regional trajectory. Westerly winds are the most common at the Livermore Station, the closest station to the proposed project that measures wind speed and direction (California Air Resources Board 1989). West and southwest winds are the

most common during the spring, summer, and fall months. During the winter months, northeast winds prevail. Long-term wind data recorded at the Livermore Station indicates that daily winds average 4.4 mph with southwest and west winds typically average 5.1 and 5.7 mph, respectively.

Meteorological Influences on Air Quality

Regional flow patterns affect air quality patterns by directing pollutants downwind of sources. Localized meteorological conditions, such as moderate winds, disperse pollutants and reduce pollutant concentrations. When a warm layer of air traps cooler air close to the ground, an inversion layer is produced. Such temperature inversions hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground. During summer mornings and afternoons, these inversions are present over the project area. During summer's longer daylight hours, plentiful sunshine provides the energy needed to fuel photochemical reactions between nitrogen oxides (NO_x) and reactive organic gases (ROG), which result in ozone (O_3) formation.

In the winter, temperature inversions dominate during the night and early morning hours but frequently dissipate by afternoon. At this time, the greatest pollution problems are from carbon monoxide (CO) and NO_x . High CO concentrations occur on winter days with strong surface inversions and light winds. Carbon monoxide transport is extremely limited.

CRITERIA AIR POLLUTANTS

Currently, most of the effort to improve air quality in the United States and California is directed toward the control of five pollutants, called "criteria" air pollutants: photochemical oxidants (ozone), CO, fine particulate matter (PM_{10}), NO_2 , and sulfur dioxide (SO_2). Fifteen years ago, suspended particulate lead would have been included in this list, but the widespread availability and use of unleaded gasoline has effectively eliminated lead as an air quality concern. Criteria pollutants, including their formation and health effects, are discussed below:

Ozone

Ozone (O_3) is a colorless gas with a pungent odor that causes eye irritation and respiratory function impairment. Most O_3 in the atmosphere is formed as a result of the interaction of ultraviolet light, ROG, and NO_x . ROG is composed of non-methane hydrocarbons, and NO_x consists of chemical combinations of nitrogen and oxygen, mainly NO and NO_2 . Motor vehicles are the primary source of ROG and NO_x . Because these photochemical reactions are regional in nature, O_3 is considered a regional pollutant.

Fine Particulate Matter (PM_{10})

PM_{10} are atmospheric particles resulting from fume-producing industrial and agricultural operations, and natural activities. Health impacts from breathing the particulates resulted in revision of the Total Suspended Particulate (TSP) standard to reflect particulates that are small enough to be inhaled (i.e., 10 microns or less in size). Current standards define acceptable concentrations of particulates that are

smaller than 10 microns in diameter, referred to as PM₁₀. PM₁₀ includes materials such as sulfates and nitrates, which can cause lung damage.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless gas that causes a number of health problems including fatigue, headache, confusion and dizziness. The incomplete combustion of petroleum fuels in on-road vehicles is a major cause of CO. CO is also produced during the winter from wood stoves and fireplaces. CO tends to dissipate rapidly into the atmosphere; consequently, violations of the CO state standard are generally limited to major roadway intersections during peak hour traffic conditions.

Nitrogen Dioxide

Nitrogen dioxide (NO₂) is an indirect product of fuel combustion in industrial sources, motor vehicles, and other mobile sources (e.g., off-road vehicles, trains, aircraft, mobile equipment, and utility equipment). NO₂ causes a number of health problems including risk of acute and chronic respiratory disease.

Sulfur Dioxide

The major source of SO₂ emissions is fuel-burning equipment in which fuel oil and/or coal are consumed. SO₂ causes a number of health problems including aggravation of chronic obstructive lung disease.

TOXIC AIR CONTAMINANTS

In addition to the criteria pollutants, another group of substances, called Toxic Air Contaminants (TACs), are known to be highly injurious, even in small quantities. TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects (i.e., injury or illness). There are hundreds of substances that can be toxic when inhaled.

TACs can be emitted from a variety of common sources, including gasoline stations, automobiles, dry cleaners, industrial operations and painting operations. Natural source emissions include windblown dust and wildfires. Farms, construction sites, and residential areas can add to toxic air emissions. TACs include both organic and inorganic chemical substances. Examples include certain chlorinated hydrocarbons, such as solvents, certain metals, and asbestos.

Health effects resulting from air toxics exposure can be categorized as either carcinogenic (cancer-causing) or non-carcinogenic. Health effects from carcinogenic air toxics are usually assessed in terms of cancer risk. Cancer risk from a project is normally expressed as the additional number of potential cancer cases per one-million people exposed to emissions from the project over their lifetimes. When exposure to more than one potential carcinogen is evaluated, the risks posed by the various individual air toxics are summed; this sum is the overall cancer risk estimate.

Non-carcinogenic health effects associated with air toxics exposure vary depending on the types and quantities of air toxics exposure. Adverse health effects, as well as the potential for nuisance and other forms of irritation, depend largely on an individual's susceptibility. Non-cancer health effects of air toxics are usually considered by comparing estimated exposure levels to known or estimated thresholds for health effects. Often a safety factor, to account for sensitive populations, is included in the threshold level used in the comparison.

REGULATORY SETTING OF AIR QUALITY

Air quality is regulated by several jurisdictions including the U.S. Environmental Protection Agency (USEPA), California Air Resources Board (CARB), BAAQMD, and the City of Pleasanton. Each of these jurisdictions develop rules, regulations and policies to attain the goals or directives imposed upon them through legislation. Although USEPA regulations may not be superseded, both state and local regulations may be more stringent.

Pollutants subject to federal ambient standards are referred to as "criteria" pollutants because the USEPA publishes criteria documents to justify the choice of standards. One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term sensitive receptors refers to specific population groups, as well as the land uses where they would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses are residences, schools, playgrounds, childcare centers, retirement homes or convalescent homes, hospitals, and clinics. The federal and state standards for the criteria pollutants and other state regulated air pollutants are shown in Table 4.6-1.

Federal Air Quality Regulations

The federal 1970 Clean Air Act authorized the establishment of national health-based air quality standards, and also set deadlines for their attainment. The federal Clean Air Act Amendments of 1990 (1990 CAAA) made major changes in deadlines for attaining National Ambient Air Quality Standards (NAAQS) and in the actions required of areas of the nation that exceeded these standards. The 1990 CAAA requires designated agencies in any area of the nation that does not meet the NAAQS to prepare a plan demonstrating the steps that will be taken to bring the area into compliance. The 1990 CAAA completely revised the federal statute. They provide a new time frame for achieving attainment of NAAQS and a new set of guidelines and planning processes for carrying out the requirements of the Amendments. Provisions of Section 182, which relates to O₃ nonattainment areas, and Section 187, which relates to CO nonattainment areas, emphasize strategies for reducing vehicle miles traveled. Section 182 requires submission of a plan revision that "identifies and adopts specific enforceable transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or number of vehicle trips in such an area to meet statutory requirements for demonstrating periodic emission reduction requirements."

The 1990 CAAA requires that projects receiving federal funds demonstrate conformity to the approved State Implementation Plan (SIP)/local air quality attainment plan for the region. In 1982, each air district within California submitted its prospective air quality attainment plan to the USEPA for

**Table 4.6-1
Ambient Air Quality Standards**

California ¹		National ²	
Air Pollutant	Concentration	Primary (>)	Secondary (>)
<i>Ozone</i>	0.09 ppm, 1-hr avg	0.12 ppm, 1-hr avg 0.08 ppm, 8-hr avg ³	0.12 ppm, 1-hr avg 0.08 ppm, 8-hr avg ³
<i>Carbon Monoxide</i>	9 ppm, 8-hr avg 20 ppm, 1-hr avg	9 ppm, 8-hr avg 35 ppm, 1-hr avg	9 ppm, 8-hr avg 35 ppm, 1-hr avg
<i>Nitrogen Dioxide</i>	0.25 ppm, 1-hr avg	100 µg/m ³ annual	100 µg/m ³ annual
<i>Sulfur Dioxide</i>	0.04 ppm, 24-hr avg 0.25 ppm, 1-hr avg	0.03 ppm, annual avg 0.14 ppm, 24-hr avg	0.5 ppm, 3-hr avg
<i>Suspended Particulate Matter (PM₁₀)</i>	30 µg/m ³ annual geometric mean 50 µg/m ³ , 24-hr avg	50 µg/m ³ annual arithmetic mean 150 µg/m ³ , 24-hr avg	50 µg/m ³ annual arithmetic mean 150 µg/m ³ , 24-hr avg
<i>Suspended Particulate Matter (PM_{2.5})</i>	--	15 µg/m ³ annual arithmetic mean 65 µg/m ³ , 24-hr avg	15 µg/m ³ annual arithmetic mean 65 µg/m ³ , 24-hr avg
<i>Lead</i>	1.5 µg/m ³ , 30-day avg	1.5 µg/m ³ calendar quarter	1.5 µg/m ³ calendar quarter
<i>Sulfates</i>	25 µg/m ³ , 24-hr avg	--	--
<i>Hydrogen Sulfide</i>	0.03 ppm, 1-hr avg	--	--
<i>Vinyl Chloride</i>	0.01 ppm, 24-hr avg	--	--
<i>Visibility Reducing Particles</i>	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%.	--	--

¹ California standards for ozone, carbon monoxide, sulfur dioxide (1-hour), suspended particulate matter-PM₁₀ visibility reducing particles, are values that are not to be exceeded. The sulfur dioxide (24-hour), sulfates, lead, hydrogen sulfide, and vinyl chloride standards are not to be equaled or exceeded.

² National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

³ Based on newly established 8-hour EPA standard. The 0.12 ppm 1-hour standard will not be revoked in a given area until that area has achieved 3 consecutive years of air quality data meeting the 1-hour standard.

⁴ Based on newly established 8-hour EPA standard.

ppm = parts per million by volume
µg/m³ = micrograms per cubic meter

Source: California Air Resources Board 1998

approval and inclusion in the federally enforceable SIP. Until the 1982 SIP is updated, conformity can be fulfilled by showing a project's consistency with the most recent adopted air quality attainment plan for each district. Because California standards are more strict than federal standards, conformity with the California requirements will also satisfy the CAA.

State Air Quality Regulations

The California Clean Air Act (CCAA), 1988, requires that all air districts in the state endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for O₃, CO, SO₂, and nitrogen dioxide (NO₂) by the earliest practical date. Plans for attaining CAAQS were to be submitted to CARB by June 30, 1991; however, some districts are still in the draft process. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with new authority to regulate indirect sources. Each district plan is to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. Any additional development within the region obviously would impede the reduction goals of the CCAA.

A strict interpretation of the reduction goals suggests that any general development that increases traffic within the region, no matter how large or small, would have a significant, project-specific air quality impact unless the development-related emissions are offset by concurrent emission reductions elsewhere within the air shed. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Bay Area Air Quality Management District Requirements

The BAAQMD is responsible for implementing emissions standards and other requirements of federal and state laws regarding most types of stationary emission sources. The BAAQMD regulates air quality within the basin through its permit authority and its planning and review activities.

In an effort to reach attainment of the state standards for O₃ as required by the CCAA, the BAAQMD completed its *Bay Area '94 Clean Air Plan* (CAP) (Bay Area Air Quality Management District 1994). The CAP stresses attainment of O₃ standards and focuses on strategies reducing NO_x and ROG air emissions by promoting active public involvement, by encouraging compliance through positive influence and behavior, and through public education in both the public and private sectors. Specific planning efforts related to PM₁₀ have yet to be undertaken by the BAAQMD.

EXISTING AIR QUALITY MONITORING DATA

Air pollutant concentrations are measured at monitoring stations throughout the basin. Baseline air quality in the Plan Area can be generally inferred from ambient air quality measurements conducted at air quality monitoring stations located near the project site. The nearest monitoring station located near the Pleasanton area is the Livermore-Old 1st Street monitoring stations. The ozone data collected at this monitoring station is likely to be representative of conditions throughout the Plan Area due to the regional spread of ozone pollutants. However, concentrations of particulate matter and CO tend

to be more localized. Table 4.6-2 summarizes the last 3 years of published data from this monitoring station for O₃, CO, NO₂, and PM₁₀.

Table 4.6-2 Summary of Annual Air Quality Data Livermore Monitoring Station			
	1994	1995	1996
Ozone (O₃)			
State Standard (1-hr avg, 0.09 ppm)			
Federal Standard (1-hr/8-hr avg, 0.12/0.08 ppm) ¹			
Maximum Concentration	0.13	0.16	0.14
Number of Days State Standard Exceeded	5	20	22
Number of Days Federal Standard Exceeded	2/3	7/11	8/n/a
Carbon Monoxide (CO)			
State Standard (1-hr/8-hr avg, 20/9.1 ppm)			
Federal Standard (1-hr/8-hr avg, 35/9.5 ppm)			
Maximum Concentration	7.0/3.5	5.0/2.4	5.0/2.6
Number of Days State Standard Exceeded	0	0	0
Number of Days Federal Standard Exceeded	0	0	0
Nitrogen Dioxide (NO₂)			
State Standard (1-hr avg, 0.25 ppm)			
Federal Standard (Annual avg, 0.053 ppm)			
Maximum Concentration	0.08	0.08	0.09
Number of Days State Standard Exceeded	0	0	0
Number of Days Federal Standard Exceeded	0	0	0
Suspended Particulates (PM₁₀)			
State Standard (24-hr avg, 50µg/m ³)			
Federal Standard (24-hr avg, 150µg/m ³) ³			
Maximum Concentration	97	52	71
% Samples Exceeding State Standard	7	2	2
% Samples Exceeding Federal Standard	0	0	0
¹ The EPA is phasing out and replacing the previous 1-hour primary ozone standard (health-based) with a new 8-hour standard. The Federal 1-hour ozone standard (0.12 ppm) will not be revoked in a given area until that area has achieved 3 consecutive years of air quality data meeting the 1-hour standard. ³ The EPA has recently revised the primary (health-based) and secondary (welfare-based) PM standards by adding a new annual PM _{2.5} standard set at 15 µg/m ³ and a new 24-hour PM _{2.5} standard set at 65 µg/m ³ . Rules and standards pertaining to PM _{2.5} monitoring are currently being developed. As a result, PM _{2.5} monitoring data is not available for the periods indicated. ppm = parts per million by volume µg/m ³ = micrograms per cubic meter n/a = not currently available			
Sources: ARB, Air Quality Data 1994 through 1996; ARB 1998.			

Relevant General Plan Policies and Programs

The following Program from the General Plan Air Quality Element would be applicable to a discussion of air quality.

Program 4.3 Encourage pedestrian-oriented developments which provide options for non-motorized transit to outside primary destination points such as parks, schools, and shopping centers.

4.6.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

For the purposes of this analysis, the BAAQMD's thresholds of significance are used to determine if the project would result in a significant air quality impact. Using the BAAQMD's CEQA Guidelines (April 1996), significant air quality impacts are measured as follows:

Construction Impacts. Project impacts would be considered significant if feasible BAAQMD construction control mitigation measures listed in the BAAQMD CEQA Guidelines are not incorporated.

Local Impacts. Project CO concentrations would be considered significant if a project contributes to CO concentrations that result in the exceedance of the State Ambient Air Quality Standard of 9.0 parts per million (ppm) averaged over 8 hours or 20 ppm for 1 hour.

Regional Impacts. Project emissions would be considered significant at a regional level if the resulting emissions of ROG, NO_x, or PM₁₀ exceeds 80 pounds per day or 15 tons per year.

SPECIFIC PLAN GUIDELINES

The Specific Plan does not include guidelines addressing air quality, however, it does include measures that are intended to reduce potential impacts to less-than-significant levels. These measures are included at the end of this section.

CONSTRUCTION IMPACTS

Impact
4.6-1

Construction-Related Air Emissions. Construction activities associated with the proposed Specific Plan would temporarily produce emissions of NO_x, ROG, SO₂, CO, and PM₁₀. Emissions would vary substantially from day to day and could potentially produce substantial amounts of PM₁₀. The generation of these construction emissions on the project site would be considered a short-term potentially significant air quality impact.

Construction activities associated with the proposed Specific Plan would temporarily generate NO_x, ROG, SO₂, CO, and PM₁₀ emissions during grading, excavation, and general construction activities. Additional air pollutant emissions would be generated from paving, framebuilding, and other construction activities associated with the proposed land uses including the vineyard operations. The emissions associated with construction activities are "short-term" in the sense that they would be limited to the construction period, and would only be experienced downwind of the project site.

Emissions associated with excavation and grading operations would also vary substantially from day to day depending on the level of activity, the specific construction activity being performed, and weather conditions. Table 4.6-3 presents exhaust emission rates associated with typical heavy-duty construction equipment. In addition, each acre of soil disturbed is estimated to create approximately 51 pounds per day per acre of PM₁₀ (BAAQMD 1996). Construction of project facilities is expected to occur on a lot-by-lot basis, rather than mass construction of the project all at once. Assuming 6 acres are graded in any given day using 1 scraper, 1 motor grader, 1 wheeled loader, and 1 off highway truck, approximately 85 pounds per day of NO_x, 6 pounds per day of ROG, 30 pounds per day of CO, and 313 pounds per day of PM₁₀ would be generated during excavation and grading activities.

Table 4.6-3
Emission Rates for Heavy-duty Diesel-powered Equipment

Type of Equipment	Pollutant (lbs/hr)			
	ROG	NO _x	CO	PM ₁₀
Track-type Tractor	0.12	1.26	0.35	0.11
Wheeled Tractor	0.18	1.27	3.59	0.14
Wheeled Dozer	0.19	4.17	1.79	0.17
Scraper	0.27	3.84	1.26	0.41
Motor Grader	0.039	0.71	0.15	0.061
Wheeled Loader	0.23	1.89	0.57	0.17
Track-type Loader	0.095	0.83	0.20	0.058
Off-Highway Truck	0.19	4.17	1.79	0.26
Backhoe	1.44	10.16	28.56	1.12
Roller	0.59	0.86	0.30	0.050
Miscellaneous	0.15	1.69	0.68	0.14

Source: US EPA AP-42, Volume II, 1985.

Emissions associated with general construction activities include emissions associated with the transport of workers, machinery and supplies, as well as emissions produced onsite during general building and roadway construction. Like the emission estimates above, these emissions could also vary substantially from day to day. Based on the emissions rates in Table 4.6-3 and assuming four pieces of heavy-duty

diesel-powered equipment (2 off-highway trucks, 1 wheeled loader, and 1 backhoe) operating continuously for 8 hours per day, the proposed project would generate construction equipment emissions of approximately 92 pounds per day of NO_x, 6 pounds per day of ROG, 62 pounds per day of CO, and 7 pounds per day of PM₁₀. The uncontrolled generation of these construction emissions would be considered a potentially significant short-term air quality impact.

LOCAL IMPACTS

Impact
4.6-2

Local Air Quality Impacts of Project Traffic. Operation of the proposed project would increase CO concentrations at nearby roadway intersections due to increased project-generated vehicular traffic. However, the proposed project would not contribute to CO concentrations in excess of state or federal standards. Consequently, this impact would be considered less than significant.

Occupancy and use of the proposed Specific Plan land uses would generate additional daily vehicle trips on area roadways and may contribute to greater congestion at nearby intersections. Because elevated CO concentrations are often localized, heavy traffic volumes and congestion can lead to high levels of CO, or “hotspots”, while concentrations at the closest air quality monitoring station may be below state and federal standards. Due to the introduction of lower emitting motor vehicles and cleaner burning fuels, future emissions and ambient concentrations of CO are projected to progressively decrease.

Predicted localized CO concentrations (Table 4.6-4) were calculated for both short-term and long-term future land use scenarios, as well as the existing conditions. The short-term development scenario assumes existing conditions plus future traffic from all approved but unbuilt or unoccupied development in the City of Pleasanton plus project-generated traffic associated with the complete buildout of the project area. The long-term development scenario assumes future traffic associated with buildout of the region (in accordance with the current General Plan) plus buildout of the project area. In addition, two development scenarios are presented for both the short-term and long-term assuming development of the proposed project with and without of the 100-bed inn, spa, restaurant and conference facility. Predicted CO concentrations were calculated for seven nearby roadway intersections, including: 1) Santa Rita Road and Valley Avenue; 2) Bernal Avenue, Valley Avenue, and Stanley Boulevard; 3) Bernal Avenue and Vineyard Avenue East; 4) First Street, Sunol Boulevard, and Bernal Avenue; 5) First Street, Ray Street, and Vineyard Avenue; 6) Bernal Avenue, Vineyard Avenue, and Tawny Drive; and 7) Vineyard Avenue and Isabel Avenue.

In comparison to existing conditions, short-term development would result in only a slight increase in CO concentrations at the intersections analyzed, whereas long-term predicted CO concentrations would be slightly less. As indicated in Table 4.6-4, none of the analyzed intersections would experience short-term or long-term localized CO concentrations above the 1-hour standard of 20 ppm or 8-hour standard of 9 ppm. As a result, mobile source CO concentrations attributed to the project would not contribute to CO concentrations in excess of state or federal standards and would, therefore, be considered less than significant.

Table 4.6-4
Predicted Maximum 1-hour and 8-hour
Carbon Monoxide Concentrations (ppm)

Intersections	Time Period	Existing Conditions	Existing-Plus Approved Development-Plus Project (Short-Term)		General Plan Buildout-Plus Project (Long-Term)	
			Without Commercial Development ¹	With Commercial Development ²	Without Commercial Development ¹	With Commercial Development ²
Santa Rita Road/Valley Avenue	1-hr	7.5	8.5	6.0	7.1	7.1
	8-hr	4.3	5.0	3.2	4.3	4.3
Bernal Avenue/Valley Avenue /Stanley Boulevard	1-hr	6.9	7.3	8.5	6.5	6.6
	8-hr	3.8	4.1	5.0	3.9	3.9
Bernal Avenue/Vineyard Avenue East	1-hr	5.9	6.7	7.3	5.6	5.6
	8-hr	3.2	3.7	4.2	3.2	3.2
First Street/Sunol Boulevard/Bernal Avenue	1-hr	7.1	7.7	6.7	6.4	6.4
	8-hr	4.0	4.4	3.7	3.8	3.8
First Street/Ray Street/Vineyard Avenue	1-hr	6.5	6.5	7.7	6.3	6.3
	8-hr	3.5	3.6	4.4	3.7	3.7
Bernal Avenue/Vineyard Avenue/Tawny Drive	1-hr	5.8	6.0	6.5	4.7	4.7
	8-hr	3.1	3.3	3.6	2.6	2.6
Vineyard Avenue/Isabel Avenue	1-hr	5.8	6.0	6.1	4.7	4.7
	8-hr	3.1	3.2	3.3	2.6	2.6

State Standard: 1-hr/8-hr avg, 20/9.1 ppm; Federal Standard: 1-hr/8-hr avg, 35/9.5 ppm.

Predicted CO concentrations based on methodology recommended by the BAAQMD and CALINE4 methodology.

¹ Assumes development of 189 residential units, 650-student elementary school, and 20-acre community park.

² Assumes development of 171 residential units, 650-student elementary school, 20-acre community park, 100-room inn/spa/restaurant/conference facility, and 10-room bed-and-breakfast.

Source: BAAQMD, 1996; TJKM, 1998; EDAW, Inc. 1998.

REGIONAL IMPACTS

Impact
4.6-3

Regional Emissions. The proposed project would generate regional emissions primarily associated with the operation of motor vehicles and the use of natural gas and electricity. Additional emissions would be associated with the operation of gasoline-powered landscaping equipment, wood-burning fireplaces, and the application of architectural coatings. Regional emissions could exceed the BAAQMD significance threshold of 80 pounds per day for NO_x and contribute to the long-term degradation of regional air quality. This would be considered a potentially significant project impact for the proposed residential development and a significant and avoidable impact when the residential development is combined with commercial development.

The Vineyard Avenue Corridor Specific Plan land use concept features a mix of single-family homes, vineyards, open space, a community park, and an elementary school. In addition, the option to develop a 100-room inn (including a spa, restaurant, and conference facility) may be conditionally permitted in place of approximately 18 planned single-family housing units. Small bed-and-breakfast inns may also be allowed for a proportionate number of residential units in the vineyard and open space areas.

Development of these land uses would result in long-term emissions of regional air pollutants. Regional emissions would be primarily associated with motor vehicle operation, regional electrical power generation, and natural gas usage. A detailed discussion of the emissions associated with vineyard operations is included in Public Health and Safety section (4.9) of this report. Emissions from motor vehicle operation are anticipated to represent the greatest long-term air quality impact associated with development of the proposed project. Increased electrical usage for space heating, lighting and operation of electrical appliances would result in additional regional emissions. Use of natural gas at the project site would create small quantities of air pollutants primarily associated with the burning of natural gas by water heaters, space heating and gas appliances. Additional emissions would be generated with the use of gasoline-powered landscaping equipment, wood-burning fireplaces, and architectural coatings. Regional pollutants of greatest concern include ROG, NO_x, SO_x, and PM₁₀. (CO is considered a localized pollutant because it dissipates rapidly and has been addressed in Impact 4.6-2.)

Total emissions associated with occupancy and operation of the proposed land uses have been calculated based on the estimated emission levels generated from the three primary source groups (motor vehicles, natural gas, and electricity). Project generated emissions are presented in Table 4.6-5. for two development scenarios: 1) Proposed Project-No Commercial Development (for purposes of this analysis, bed and breakfast inns are not considered commercial development); and 2) Proposed Project-Plus Commercial Development. As indicated, total emissions associated with occupancy and operation of the proposed land uses assuming no commercial development would be approximately 230 pounds per day of CO, 19 pounds per day of ROG, 80 pounds per day of NO_x, 6 pounds per day of PM₁₀, and 9 pounds per day of SO_x. If the option for the commercial land uses is approved for development, project-generated emissions would increase to approximately 339 pounds per day of CO, 24 pounds per day of ROG, 88 pounds per day of NO_x, 8 pounds per day of PM₁₀, and 9 pounds per day of SO_x.

Minor increases in these emission levels would be anticipated with the use of residential fireplaces, gasoline-powered landscape maintenance equipment, and various other area sources.

Table 4.6-5 Project-generated Regional Emissions				
Emission Sources	Emissions Generated (pounds/day)			
	ROG	NO _x	SO _x	PM ₁₀
Proposed Project-No Commercial Development¹				
Vehicles	18.5	23.9	3.1	4.5
Electrical Usage	0.5	52.8	5.5	1.8
Natural Gas Consumption	0.2	3.6	-	-
Total - Without Mitigation	19.2	80.3	8.6	6.3
Total - With Mitigation ³	18.4	74.0	8.0	6.0
Proposed Project-Plus Commercial Development²				
Vehicles	23.2	31.1	4.0	5.9
Electrical Usage	0.5	52.0	5.4	1.8
Natural Gas Consumption	0.3	4.6	-	-
Total - Without Mitigation	24.0	87.7	9.4	7.7
Total - With Mitigation ³	23.0	81.5	8.7	7.3
BAAQMD Emission Threshold: 80 lbs/day for each regional pollutant.				
Vehicle emissions were calculated using URBEMIS5 and BAAQMD CEQA Guidelines recommendations. Electricity and natural gas emissions were estimated based on methodology obtained from the SCAQMD Air Quality Handbook, 1993.				
¹ Assumes development of 189 residential units, 650-student elementary school, and 20-acre community park.				
² Assumes development of 171 residential units, 650-student elementary school, 20-acre community park, 100-room inn/spa/restaurant/conference facility, and 10-room bed-and-breakfast.				
³ Assumes 4% reduction in motor vehicle emissions, 6% reduction in electricity and 5% reduction in natural gas usage for energy efficient heating and cooling, 2% reduction in electricity usage for commercial lighting and 4% reduction in electricity usage for residential lighting (Information for Energy Consumption in Various Structure, South Coast Air Quality Management District, November 1993).				
Source: EDAW 1998				

As indicated in Table 4.6-5, estimated project-generated emissions of CO, ROG, SO_x, and PM₁₀ are not anticipated to exceed BAAQMD thresholds of significance for either development scenario. However, project generated emissions of NO_x both with and without development of the commercial land uses could exceed the BAAQMD threshold of 80 pounds per day. As a result, regional emissions generated with occupancy and operation of the proposed residential uses would be considered

potentially significant. Mitigation measures are available to reduce the NO_x emissions from residential uses to less-than-significant levels. However, when the commercial uses are combined with the residential uses, Mitigation Measure would not be sufficient to reduce NO_x emissions to less-than-significant levels. Therefore, the development of commercial uses on the site would result in significant and unavoidable regional air quality impacts.

Impact
4.6-4

Operational Emissions From On-Site RMC Lonestar Gravel Harvesting Activities. The RMC Lonestar property within the eastern portion of the project site (Lot 21) has been previously permitted to include future gravel harvesting operations. If mining activities were to occur on this property, they could generate dust levels that would be a nuisance for new residents. This impact would be considered potentially significant and unavoidable.

The potential exists for future mining operations to occur on the RMC Lonestar property located along the eastern boundary of the Plan Area (Lot 21). This site is adjacent to an area that has already been mined as part of a substantial, long-term, regional gravel mining operation. It is not currently known if RMC Lonestar will ultimately mine gravel on Lot 21, but it is permitted to do so. This lot is shown in the Specific Plan for development of 24 housing units, vineyards, realignment of Vineyard Avenue, and mining. Approval of mining on the Lonestar site occurred previously and is not part of this project. (Consideration of the development of 24 homes is part of the proposed project consideration.) Excavation activities on Lot 21 would be expected to cause dust generation that could become a nuisance and if excessive, a health risk for nearby sensitive receptors. These sensitive receptors would consist primarily of the existing and new residents that would be located on Lots 19, 20, 27, 28, and 32. This would be considered a potentially significant project impact.

The discussion of landfill gas generated from the prior landfill operations on Lot 14 is included in Section 4.9 (Public Health and Safety) of this report. It has not been included in this air quality section because it is a public health hazard issue.

4.6.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.6-1
mitigation

Construction-Related Air Emissions. Site grading, excavation, and general construction activities could result in temporarily significant air quality impacts. To mitigate this impact, the Specific Plan air quality mitigation measures shall be implemented at all construction sites in accordance with BAAQMD Basic and Enhanced Control Measures. The specific controls included in the Specific Plan are as follows:

- ▶ During the construction period, all active unpaved construction areas shall be watered at least twice daily or treated with non-toxic soil stabilizers in

order to avoid dust. Exposed stockpiles of dirt or sand shall be enclosed, covered, watered twice daily, or treated with non-toxic soil binders.

- ▶ If soil material is carried on public or private roads, such roads shall be swept daily with water sweepers to control dust, where applicable.
- ▶ In graded construction area, permanent replacement vegetation shall be planted as quickly as possible, properly irrigated and maintained in healthy growing condition. Graded areas that remain inactive for ten days or more during the rainy season (i.e., October 1 to April 1) without permanent replanting should be hydro seeded or stabilized to inhibit dust.
- ▶ All trucks hauling excavated materials shall be covered with tarpaulins or other effective covers.
- ▶ All unpaved access roads, parking areas, and staging areas at construction sites shall be rocked, watered three times daily, or covered with non-toxic soil stabilizers.
- ▶ Traffic speed on unpaved roads shall be limited to 15 miles per hour.
- ▶ Reactive organic gas (ROG) emissions from adhesives, clean-up solvents, paint, and asphalt paving materials used during project construction shall be reduced by using materials with a low ROG content, in compliance with Bay Area Air Quality Management District standards.

impact
4.6-3
mitigation

Regional Emissions. The following mitigation measures are incorporated into the proposed project to reduce regional project-generated air emissions:

- ▶ The project site should be linked to the local transit system along the realigned Vineyard Avenue and school loop street system and provided with bus stop pull-outs and pedestrian shelters at the community park, school and applicable local street intersections along the realigned Vineyard Avenue.
- ▶ The installation of energy-efficient heating and cooling systems, and energy efficient lighting shall be required in all residential, commercial, and school construction.
- ▶ Only EPA-approved fireplaces and wood burning stoves shall be installed in residential units.

impact
4.6-4
mitigation

Operational Emissions From On-Site RMC Lonestar Gravel Harvesting

Activities. Site grading, excavation and construction activities associated with already permitted aggregate mining on the project site could result in significant air quality impacts for the duration of the mining activity. Because this activity is already a permitted use, mitigation beyond that required by the 1981 Livermore-Amador Valley Quarry Reclamation Specific Plan would not be feasible to impose as part of this project.

4.6.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary for mitigation of impact 4.6-1 and 4.6-2. No other feasible mitigation is available to further reduce potentially significant NO_x impacts associated with including the 100-bed inn, spa, restaurant and conference facility in the Plan or potentially significant emissions associated with gravel harvesting activities.

4.6.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the Specific Plan measures, air quality impacts would be reduced to less-than-significant levels except for the generation of regional emissions and the generation of operational emissions from onsite RMC Lonestar gravel harvesting activities. For regional emissions, the generation of NO_x would exceed the significance threshold established by the BAAQMD if development of the Specific Plan Area includes the 100-bed inn, spa, restaurant and conference facility. If these land uses are not included in the development and residential uses are constructed instead, the measures included in the Specific Plan would reduce NO_x emissions to less-than-significant levels. For gravel harvesting impacts, because it is already a permitted activity, mitigation would not be feasible to impose as part of the proposed project. This impact would, therefore, remain potentially significant and unavoidable.

4.7 TRANSPORTATION AND CIRCULATION

The following is a discussion of the traffic and circulation characteristics of the local area and the anticipated impacts and mitigation associated with development of the Specific Plan.

4.7.1 EXISTING CONDITIONS

TRAFFIC STUDY PURPOSE

A traffic study was prepared for the Specific Plan Area on May 19, 1998. The purpose of the traffic study was to compare future traffic operating conditions of the local roadway network with and without the development of the proposed project. The primary focus of the study was to determine the traffic impacts associated with the proposed project and identify appropriate mitigation measures. The methodology used is based on the process approved by the City of Pleasanton for analyzing traffic impacts of proposed development. The location of the site and its vicinity are illustrated in Exhibit 4.7-1 and an illustration of the process used in the analysis is provided in Exhibit 4.7-2.

TRAFFIC ANALYSIS APPROACH

Study Intersections

The traffic study evaluated the impacts generated by the proposed project on seven intersections in the Plan Area. These intersections were identified through consultation with the City of Pleasanton. Traffic operating conditions were evaluated at the following seven intersections:

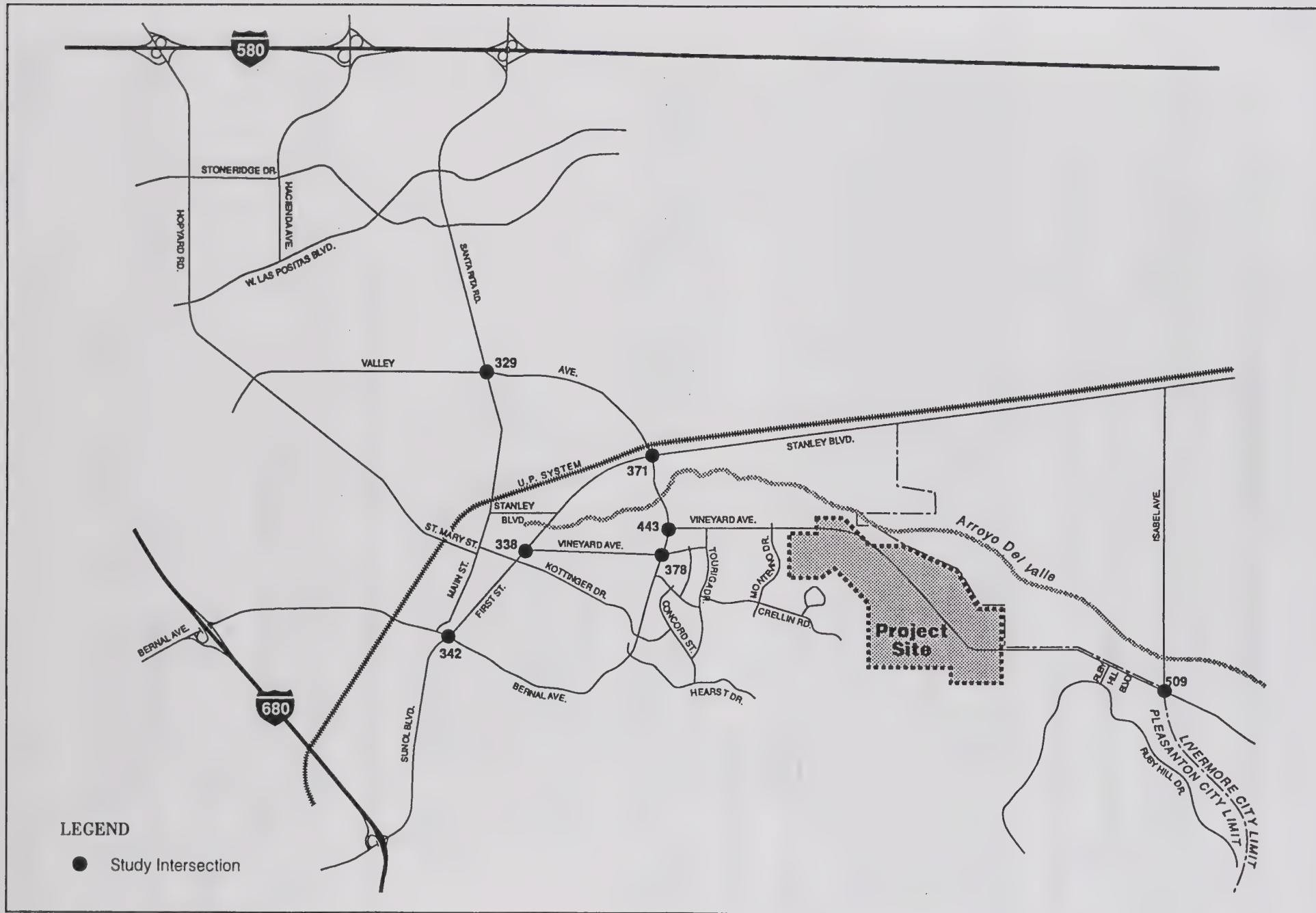
- 329 Santa Rita Road/Valley Avenue
- 338 First Street/Ray Street/Vineyard Avenue
- 342 First Street/Sunol Boulevard/Bernal Avenue
- 371 Bernal Avenue/Valley Avenue/Stanley Boulevard
- 378 Bernal Avenue/Vineyard Avenue/Tawny Drive
- 443 Bernal Avenue/Vineyard Avenue East
- 509 Vineyard Avenue/Isabel Avenue

(Intersection numbers indicated correspond to City traffic model numbers.)

The traffic study evaluated conditions during the morning (a.m.) and evening (p.m.) peak hours of traffic on the roadway network. The a.m. peak hour typically occurs between 7:00 a.m. and 9:00 a.m. and p.m. peak hour between 4:00 p.m. and 6:00 p.m.

Study Scenarios

Traffic conditions were analyzed for two future land use and roadway network scenarios in addition to existing conditions. These scenarios demonstrate the impacts of the proposed Specific Plan both in the near-term and long-term future. The study scenarios are as follows:



Source: TJKM, 1998.

Vicinity Map

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

EXHIBIT 4.7-1

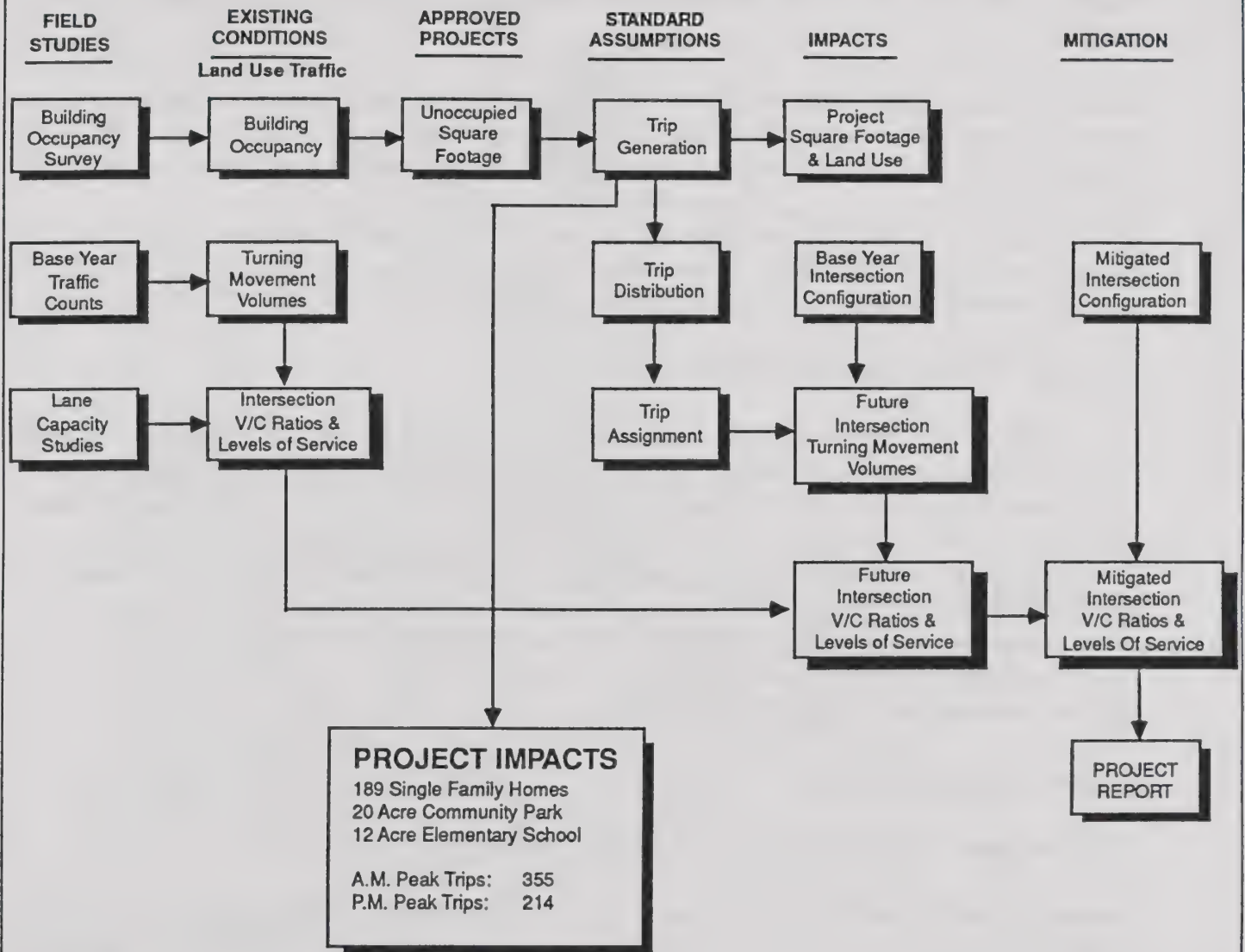
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"Standard Requirements for a Traffic Study in North Pleasanton"



NOTES

V/C Ratio = Volume-to-capacity-ratio
 Level of Service = Letter scale used to describe travel delay and congestion
 Trip Generation = Amount of traffic entering and leaving a site
 Trip Distribution = Direction of travel from site
 Trip Assignment = Choice of route from site
 Mitigation = Roadway improvements to improve level of service
 ADT = Average daily traffic (24-hour period)
 Peak Trips = Highest hourly number of trips generated during the peak period

Source: TJKM, 1998.

Existing Conditions - This scenario evaluates existing traffic volumes and roadway conditions.

Existing plus Approved Development Conditions - This scenario assumes existing conditions plus future traffic from all approved but unbuilt or unoccupied development in the City of Pleasanton. This scenario is the short-term future background conditions against which the proposed project is to be compared.

Existing plus Approved plus Proposed Vineyard Avenue Corridor Specific Plan Conditions - This scenario is identical to the previous scenario but with the addition of land use and traffic associated with the proposed Specific Plan. Short-term impacts of the proposed project are evaluated under this scenario.

In addition, the City of Pleasanton typically requires that all proposed development evaluate traffic impacts under General Plan buildout conditions. These conditions are discussed in Section 6 - Cumulative and Growth Inducing Impacts of this report.

1996 CITY OF PLEASANTON TRAFFIC MODEL

The 1996 City of Pleasanton Traffic Model was utilized to obtain vehicular trip generation and distribution assumptions for all future scenarios. The model, which takes into account likely peak hour route choices, assigned future traffic to the local street system. In the traffic model, the City is divided into numerous traffic analysis zones as shown in Exhibit 4.7-3. The proposed project would occupy Traffic Analysis Zone (TAZ) 110. Local streets and intersections within residential neighborhoods are not included in the traffic model but freeways, arterials, and most collector streets are represented. The model distributes trips from the traffic analysis zones to City collectors, arterials, and to freeways. It also assigns turning movement volumes at selected intersections. The model output was used to evaluate operating conditions at the seven study intersections.

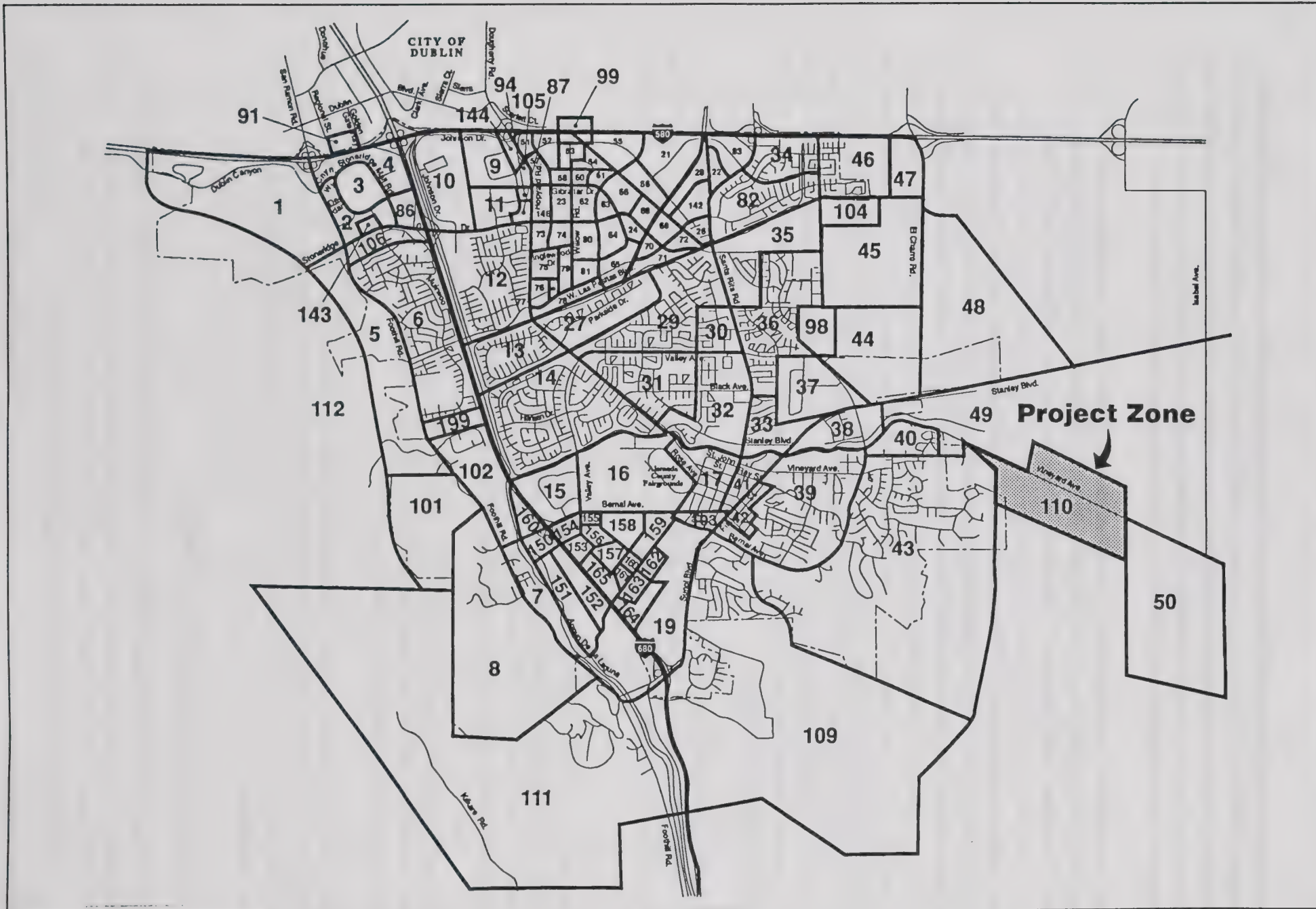
Existing Roadway Network

Important roadways serving the Plan Area are described below.

Vineyard Avenue is generally a two-lane arterial street that feeds through traffic from East Pleasanton to the Downtown Pleasanton area. West of Bernal Avenue, the roadway capacity is approximately 10,000 vehicles per day (vpd). The existing average daily traffic volume is 5,000 to 7,000 vpd.

From east of Bernal Avenue, east to near Montevino Drive, Vineyard Avenue is a five-lane arterial with parking and bike lanes on both sides and a two-way left-turn lane in the center of the roadway. The existing average daily traffic volume is 8,100 vpd. The capacity of this improved section of Vineyard Avenue is approximately 30,000 vpd.

From Montevino Drive east to Pietronave Lane, Vineyard Avenue narrows to a two-lane arterial with left-turn pockets and bike lanes and no parking. On this segment of Vineyard Avenue, the existing average daily traffic is 2,500 vpd, based on 1996 average daily trip counts conducted by the City. The roadway capacity is 15,000 vpd.



Source: TJKM, 1998.

Traffic Zone Map

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

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EXHIBIT 4.7-3

NOT TO SCALE



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From just east of Pietronave Lane along the project frontage, Vineyard Avenue is currently an unimproved narrow (23-foot-wide), two-lane, undivided arterial with no shoulders and a speed limit of 40 mph. The road is winding in parts. The current capacity of this roadway segment is 10,000 vpd. This roadway segment would be widened as part of the proposed project's realignment of Vineyard Avenue to improve capacity to 15,000 vpd, although it would remain a two-lane arterial.

Near the Ruby Hill development at Isabel Avenue, Vineyard Avenue has already been widened to improve capacity to 15,000 vpd. The two-lane arterial has bicycle lanes and unpaved shoulders on both sides. The posted speed limit on this section of Vineyard increases to 50 mph.

Bernal Avenue in the vicinity of Vineyard Avenue is a two-lane arterial street with separate left-turn lanes at intersections. It has a capacity of approximately 15,000 vpd. The existing average daily traffic volume on Bernal Avenue between Vineyard Avenue East and Vineyard Avenue/Tawny Avenue is 7,300 vpd. North of Stanley Boulevard, Bernal Avenue joins Valley Avenue. Together with Valley Avenue, Bernal Avenue forms a loop road around central Pleasanton providing convenient access to other Pleasanton arterial streets. Just south of Stanley Boulevard, Bernal Avenue has been improved to a four-lane divided arterial with left-turn pockets and carries 10,220 vpd. Bernal Avenue crosses Arroyo del Valle between Vineyard Avenue and Stanley Boulevard. The City has identified the need for a second bridge for the Bernal Avenue crossing of Arroyo del Valle with anticipated future development in the local area.

Santa Rita Road is a four- to six-lane arterial that provides access to I-580 and destinations further north. The existing average daily traffic volume north of Stanley Boulevard ranges from 18,400 vpd to 37,500 vpd. South of Stanley Boulevard, Santa Rita Road becomes Main Street carrying 17,200 vpd.

First Street is a three-lane roadway that parallels Main Street in downtown Pleasanton. It provides access to the eastern edge of the Downtown area. South of Bernal Avenue, First Street becomes Sunol Boulevard which provides an access to I-680. To the north, First Street becomes Stanley Boulevard, a major four-lane east-west arterial, providing another access between Pleasanton and Livermore.

Vallecitos Road is designated as part of *State Route 84*, which is a state highway linking I-580 in Livermore with I-680 to the south of Pleasanton. South of Vineyard Avenue, Vallecitos Road is primarily a winding, undivided two-lane roadway.

Isabel Avenue is a narrow and undivided two-lane roadway extending south of Stanley Boulevard to Vineyard Avenue. This roadway is located entirely within the City of Livermore. The connection and improvement of Isabel Avenue between Stanley Boulevard and Airway Boulevard is planned for the short-term future.

Existing Intersection Level of Service Analysis

Seven intersections were evaluated in this study. Six of the intersections are located within the City of Pleasanton. The remaining intersection of Isabel Avenue and Vineyard Avenue is located within the City of Livermore. The study intersections are shown in Exhibit 4.7-1. Turning movement volumes

for the Pleasanton intersections were counted in January of 1998 by the City of Pleasanton. The turning movement volumes for the Livermore intersection were counted in May of 1998. Exhibit 4.7-4 illustrates the existing peak hour turning movement volumes at all of the study intersections. Note that intersection numbers indicated within this report correspond with those used in the Pleasanton Traffic Model.

The study intersections and their existing a.m. and p.m. peak hour operating conditions are also listed on Table 4.7-1. The City of Pleasanton evaluates operating conditions at signalized intersections using a method known as the Intersection Capacity Utilization (ICU) method. This methodology reports peak hour intersection conditions as volume-to-capacity (V/C) ratios along with their corresponding level of service ratings. The unsignalized study intersection was analyzed using the applicable methodology contained in the *1994 Highway Capacity Manual* (HCM). The HCM methodology reports peak hour intersection conditions as average delay per vehicle along with corresponding level of service ratings. Descriptions of these methodologies are provided in Appendix B.

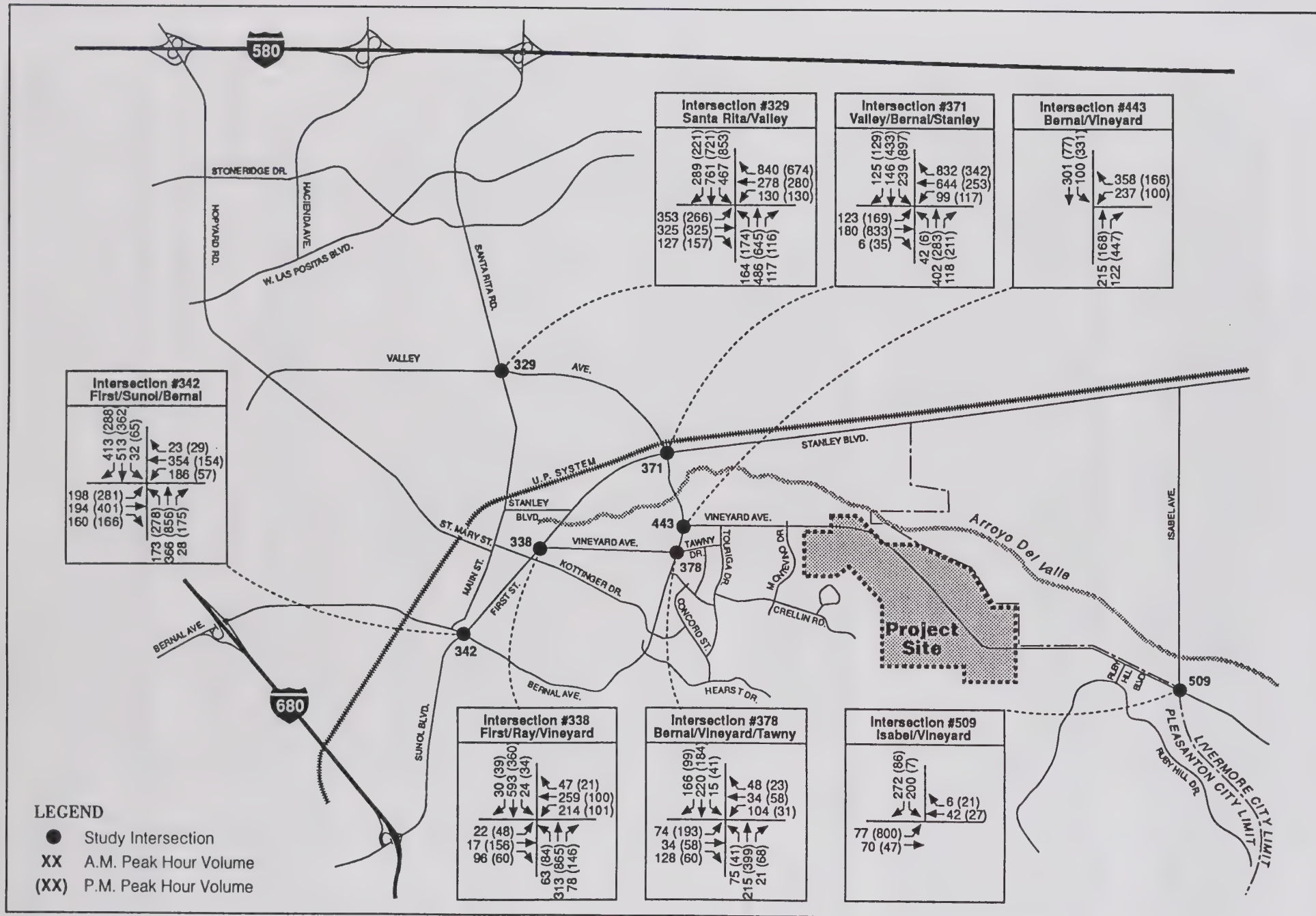
Table 4.7-1
Peak Hour Intersection Levels of Service - Existing and
Existing Plus Approved Development Conditions

ID	Intersection Location	Intersection Control	Peak Hour	EXISTING		EXISTING + APPROVED	
				V/C ¹	LOS	V/C ¹	LOS
329	Santa Rita Road/Valley Avenue	Signalized	AM PM	0.64 0.81	B D	0.80 0.79	C C
338	First Street/Ray Street/Vineyard Avenue	Signalized	AM PM	0.59 0.80	A C	0.60 0.82	A D
342	First Street/Sunol Boulevard/Bernal Avenue	Signalized	AM PM	0.61 0.60	B A	0.73 0.76	C C
371	Bernal Avenue/Valley Avenue/Stanley Boulevard	Signalized	AM PM	0.83 0.81	D D	0.85 0.83	D D
378	Bernal Avenue/Vineyard Avenue/Tawny Drive	Signalized ²	AM PM	0.54 0.53	A A	0.49 0.54	A A
443	Bernal Avenue/Vineyard Avenue East	Signalized ²	AM PM	0.51 0.58	A A	0.59 0.79	A D
509	Isabel Avenue/Vineyard Avenue	One-Way STOP	AM PM	7.5 5.5	B B	18.2 8.0	C B

¹ Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicle for the delayed movements at unsignalized intersections.

² Intersection is currently unsignalized but is planned for eventual signalization. To ensure a consistent comparison with future scenarios, signalization is assumed.

Source: TJKM 1998



Source: TJKM, 1998.

Existing (1998) Traffic Volumes

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

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EXHIBIT 4.7-4

NOT TO SCALE



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Level of service ratings are qualitative descriptions of intersection operations and are reported using an A through F letter rating system to describe travel delay and congestion. Level of Service A indicates free-flow conditions with little or no delay and LOS F indicates jammed conditions with excessive delays and long back-ups. A description of level of service ratings is also provided in Appendix B. The City of Pleasanton General Plan considers LOS D or better to be acceptable.

Table 4.7-1 indicates that all existing study intersections currently operate acceptably at or above LOS D (V/C of 0.90 and below or delay of 30 seconds and below). All of the study intersections operate at LOS D or better during both peak hours. The unsignalized study intersection of Isabel Avenue and Vineyard Avenue operates acceptably at LOS B for the delayed movements during both peak hour periods. Signalization of this intersection is not required based on Caltrans signal warrants for peak hour volumes. Appendix B contains detailed calculations for the intersection level of service analyses and the signal warrant analyses, respectively.

Short-term Future Intersection Level of Service Analysis

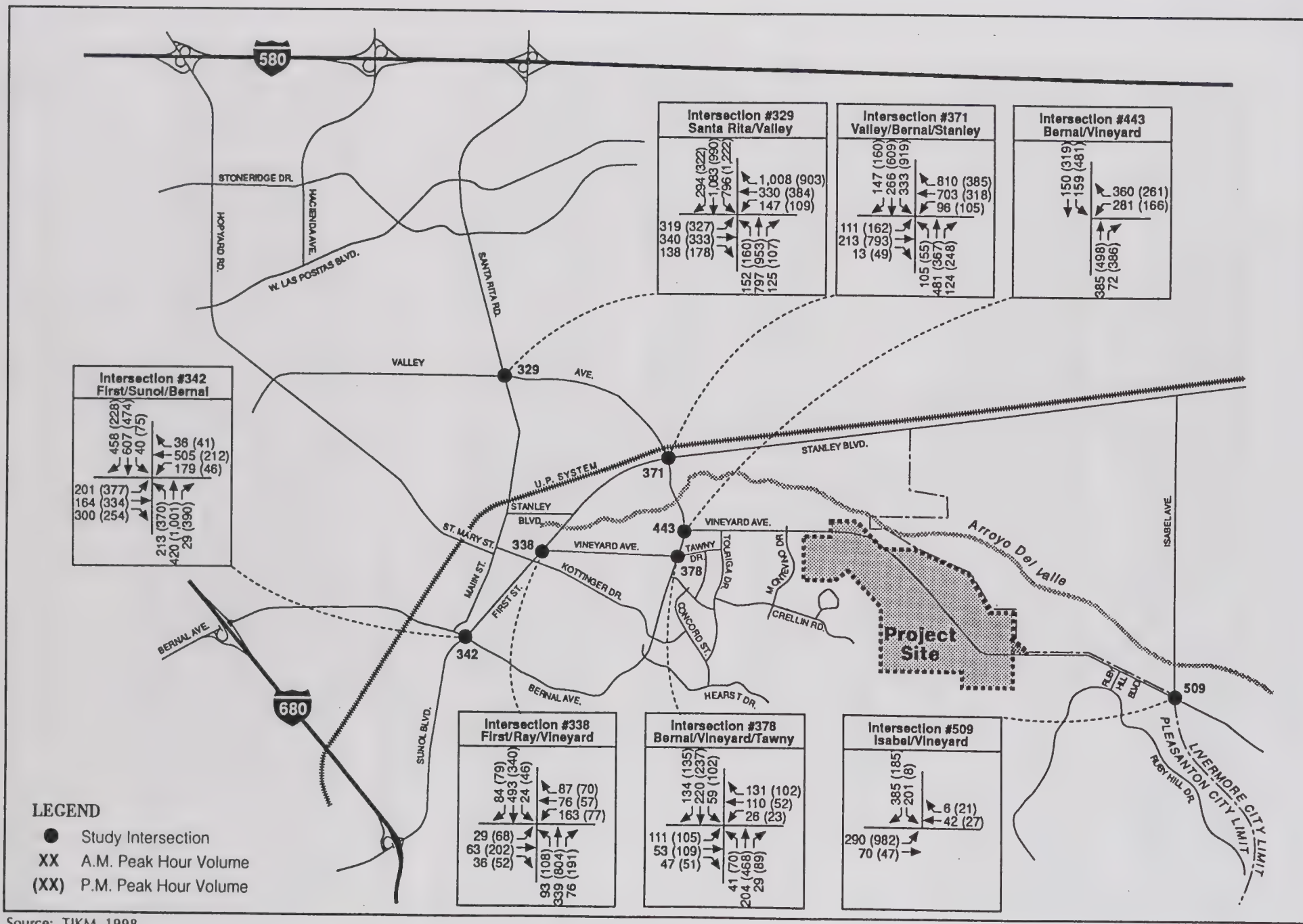
Forecasted traffic volumes for the short-term future scenarios are illustrated in Exhibit 4.7-5. The forecasted volumes at the study intersections were reanalyzed to determine the volume-to-capacity ratios and corresponding level of service ratings for the a.m. and p.m. peak hours.

Exhibit 4.7-5 illustrates the traffic volumes generated from approved developments added to existing traffic volumes at each of the study intersections. The results of the intersection level of service analysis are summarized in Table 4.7-1. Detailed level of service calculations are contained in Appendix B.

Under *Existing Plus Approved Development* conditions, all seven study intersections are expected to operate acceptably at LOS D or better. The unsignalized intersection of Isabel Avenue and Vineyard Avenue will also continue to operate at acceptable levels of service. However, the conflict between the side street and major street traffic trigger Caltrans signal warrants for peak hour volumes. This is one of several indications that signalization of the intersection should be further investigated; however, because the intersection would operate at an acceptable level of service, signalization would not be necessary.

Planned Transportation Improvements

Planned transportation improvements were assumed to be completed for the analysis of future traffic conditions. Planned improvements of the existing roadway network include the construction of the I-580/I-680 flyover, the extension of Stoneridge Drive easterly to El Charro Road and its connection with I-580, and the completion of Isabel Avenue between Stanley Boulevard and Airway Boulevard in the City of Livermore. Isabel Avenue will be a widened two-lane road. Numerous intersection improvements are also planned and funded and these have been assumed completed for the analysis. Specifically, the following improvements at the intersection of Santa Rita Road/Valley Avenue have funds reserved from the North Pleasanton Improvement District:



Source: TJKM, 1998.

Existing Plus Approved Traffic Volumes

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

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EXHIBIT 4.7-5



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- ▶ Modify the southbound Santa Rita Road approach to Valley Avenue to consist of three left-turn lanes, a through lane, and a shared through right-turn lane.
- ▶ Add a third through lane and an exclusive right-turn lane on the northbound Santa Rita Road approach to Valley Avenue
- ▶ Add a second left-turn lane on the westbound Valley Avenue approach to Santa Rita Road.

The analysis of future traffic conditions did not assume the construction of the planned I-680/West Las Positas Boulevard interchange, currently under detailed study by the City of Pleasanton. The interchange has previously been found to slightly increase traffic volumes at some of the study intersections and decrease them at others, but to not substantially affect levels of service at those intersections.

Existing Pedestrian and Bicycle Circulation

Presently, a limited bicycle route exists along the project frontage on Vineyard Avenue. The existing sidewalk nearest to the project site on Vineyard Avenue terminates at Lot 1. The Ruby Hill subdivision located to the east has bicycle lanes and a pedestrian/equestrian trail along its Vineyard Avenue frontage.

Existing Transit Facilities

The transit center located closest to the project site is the East Dublin/Pleasanton BART Station located between Hopyard Road and Hacienda Drive along I-580. Weekday BART service consists of train runs approximately every 30 minutes from 4 a.m. to 5 a.m., every 15 minutes from 5 a.m. to 8:00 p.m., and every 20 minutes from 8:00 p.m. to midnight. Two park-and-ride lots are located at the station: one on either side of I-580 in East Dublin and Pleasanton.

Bus service in the area is provided by *Wheels*, a Livermore Amador Valley Transit Authority service. One *Wheels* route, Route 8, currently provides weekday service between the BART station and the project vicinity. Route 8 buses travel from the BART station via Willow Road-West Las Positas Boulevard-Hopyard Road-Valley Avenue-Santa Rita Road-First Street-Vineyard Avenue to Bernal Avenue and then back to the BART station via Kottinger Drive instead of Vineyard Avenue. This *Wheels* route operates on weekdays between approximately 6:20 a.m. and 9:50 a.m. and between 2:15 p.m. and 7:40 p.m. with 30-minute intervals.

Direct Access Responsive Transit (DART) provides "on-call" service within the Dublin-Pleasanton area between 9:00 a.m. and 2:00 p.m. on weekdays and 8:30 a.m. to 6:00 p.m. on Saturdays.

Relevant General Plan Policies and Programs

The following transportation and circulation policies and programs included within the General Plan Circulation Element are applicable to the proposed project.

- Program 1.1: Require new developments to pay for their fair share of planned roadway improvement costs.
- Program 1.2: Support the use of assessment districts to equitably spread the cost of new roadways and improvements and to facilitate installation of improvements prior to their being needed.
- Program 3.3: Prohibit private access to major arterials.
- Program 4.1: Provide setbacks, landscaping, soundwalls, and other methods to protect adjacent land uses from safety, noise, and air quality impacts associated with traffic on arterials.
- Program 5.2: Provide more than one access road (including emergency vehicle routes) to new developments, and discourage cut-through traffic by appropriate use of traffic controls (e.g., cul-de-sacs, stop signs, landscaped barriers, etc.).
- Program 5.5: Design new streets and alterations of existing streets to preserve the character and safety of existing residential neighborhoods.
- Program 6.3: Separate vehicular, bicycle, and pedestrian traffic, whenever feasible, especially on routes to schools.
- Program 6.4: Provide bike lanes on collector streets, where feasible.
- Program 6.5: Particular sensitivity should be given to new development on streets which are projected to carry more than 2,000 average daily trips, and with existing houses which front such streets.
- Program 6.7: Require the installation of bus turnouts and shelters along planned transit routes.
- Policy 15:** Create and maintain a safe, convenient, and effective bicycle system which encourages increased bicycle use.
- Program 15.3: Integrate bicycle lanes or separate bikeways into street projects, wherever feasible.
- Policy 16:** Create and maintain a safe and convenient pedestrian system which encourages walking as an alternative to driving.
- Program 16.1: Require developers to finance and install sidewalks and pedestrian pathways in future developments.
- Program 16.2: Develop a pedestrian and equestrian trail system which connects all major portions of the Planning Area.
- Program 16.3: Cooperate with East Bay Regional Parks District in completing a regional trail system and with Zone 7 in completing its Arroyo Management Plan.

4.7.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

The City of Pleasanton has adopted a standard for peak hour traffic operations at intersections outside the downtown area. A volume-to-capacity ratio of 0.90 at signalized intersections or an average delay of 30 seconds at unsignalized intersections with a corresponding level of service rating of LOS D is the limit of acceptability at City intersections.

Therefore, an intersection found to operate at LOS E or worse as a result of future development is considered significantly affected by the future development. However, one of the study intersections is under the jurisdiction of the City of Livermore. This is Isabel Avenue at Vineyard Avenue. The City of Livermore requires that intersections operate at a V/C ratio of 0.85, LOS D or better. Intersections operating at these levels of service are characterized by congestion and excessive delay and must be considered for mitigation measures.

METHODOLOGY

Trip Generation, Distribution and Assignment

Trip generation, distribution, and assignment assumptions for future developments are based on information contained in the 1996 Pleasanton Traffic Model database, which is typically updated annually to include current approvals (and to delete approved projects that have been constructed and occupied). Since the 1996 update, a series of projects have been approved within the City. Based on discussions with City Staff, these projects have been added to the database. A list of future developments and their corresponding trip generation are provided within Appendix B. The model assigned these trips to the local street system, which were then added to existing traffic volumes.

Approved Developments

Prior to evaluating project impacts, traffic impacts resulting from approved developments were analyzed at the study intersections. Local approved developments include all unbuilt facilities with all final discretionary approval given by the City as well as built but unoccupied facilities.

Proposed Project

Based on the standard City of Pleasanton trip generation rates, the project is expected to generate a total of 914 vehicular trips during the a.m. peak hour (446 inbound, 468 outbound) and 253 vehicular trips during the p.m. peak hour (155 inbound, 98 outbound). The estimated project trip generation is summarized in Table 4.7-2. Of the total a.m. peak hour trips, 754 would be attributable to the elementary school. Many of these are existing vehicle trips traveling to existing elementary school in the area that would be diverted to the new elementary school.

**Table 4.7-2
Project Peak Hour Trip Generation**

Land Use	Size	AM Peak Hour					PM Peak Hour				
		Trip Rate	In:Out Ratio	Vehicle Trip Ends			Trip Rate	In:Out Ratio	Vehicle Trip Ends		
				In	Out	Total			In	Out	Total
Single-Family	189 homes	0.80	30:70	45	106	151	1.00	70:30	132	57	189
Community Park	1 site	9.00	50:50	5	4	9	18.00	50:50	9	9	18
Elementary School	650 students	1.16	52:48	396	358	754	0.07	30:70	14	32	46
Total				446	468	914			155	98	253
<i>Source: TJKM 1998</i>											

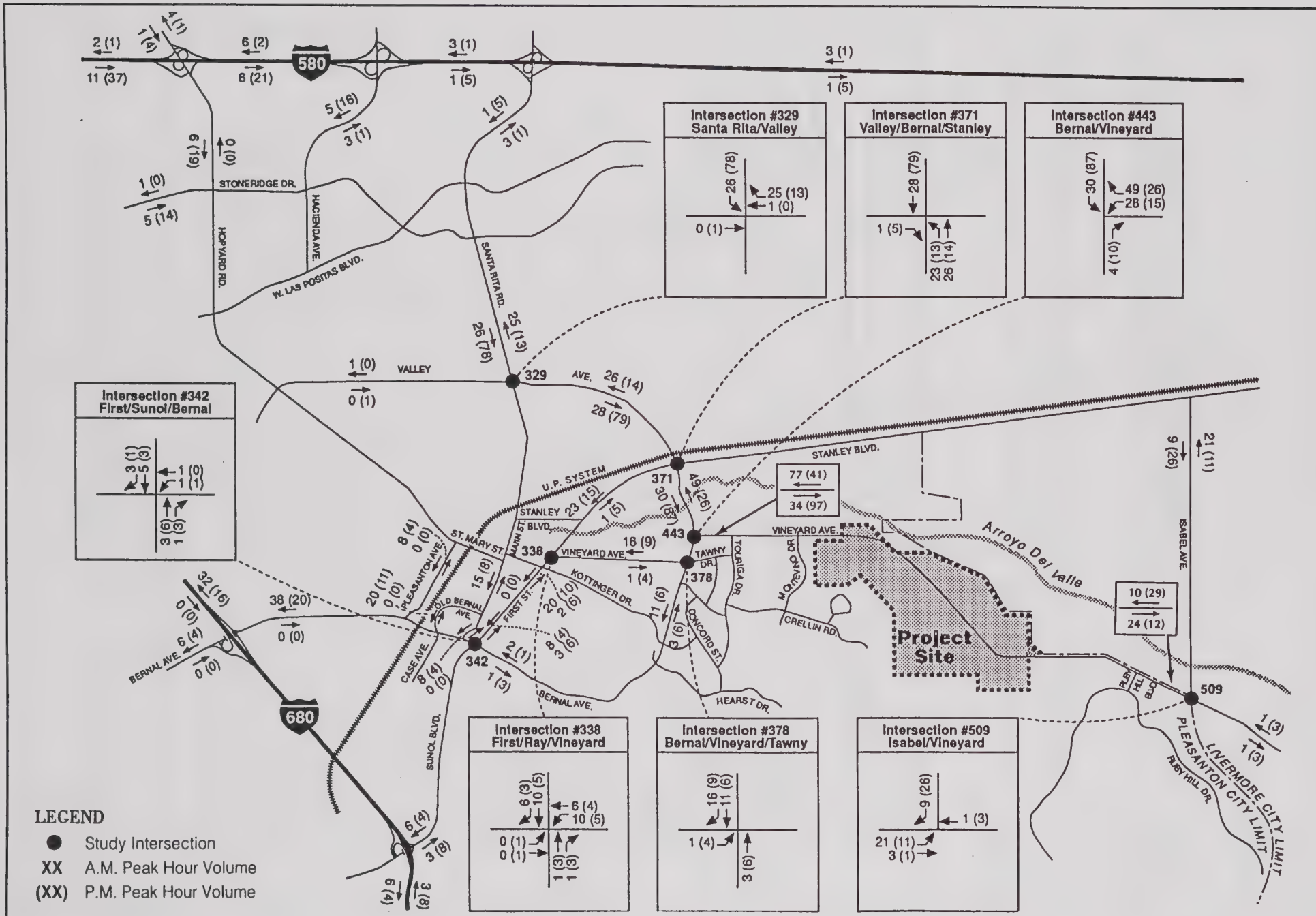
The following trip distribution patterns for residential trips were developed from the model for the p.m. peak hour:

West on Vineyard Avenue	73 percent
East on Vineyard Avenue	22 percent
North on Valley Avenue	60 percent
South to Bernal Avenue	13 percent
East to Vallecitos Road	2 percent
North on Isabel Parkway	20 percent
Internal to Plan Area	5 percent

Exhibit 4.7-6 illustrates the project residential trip distribution and peak hour turning movement volumes. The area to be served by the proposed community park and elementary school would principally serve the existing and future neighborhoods east of Bernal Avenue. Therefore, the project trips generated by the community park and elementary school would not travel through the study intersections and would not impact operating conditions.

SPECIFIC PLAN GUIDELINES

The Specific Plan includes guidelines for the development of the project site's circulation system that include circulation objectives, street design guidelines, street landscape guidelines, and pedestrian/hiking/biking/equestrian trail requirements. In addition, Specific Plan measures intended to reduce offsite traffic impacts of proposed development to less-than-significant levels are included in the Plan and discussed at the end of this section. The discussion of General Plan buildout conditions is provided in Section 6 - Cumulative and Growth Inducing Impacts of this report.



Source: TJKM, 1998.

Project-Only Trip and Traffic Volumes

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 6/98

EXHIBIT 4.7-6

NOT TO SCALE



EDAW

PROJECT IMPACTS

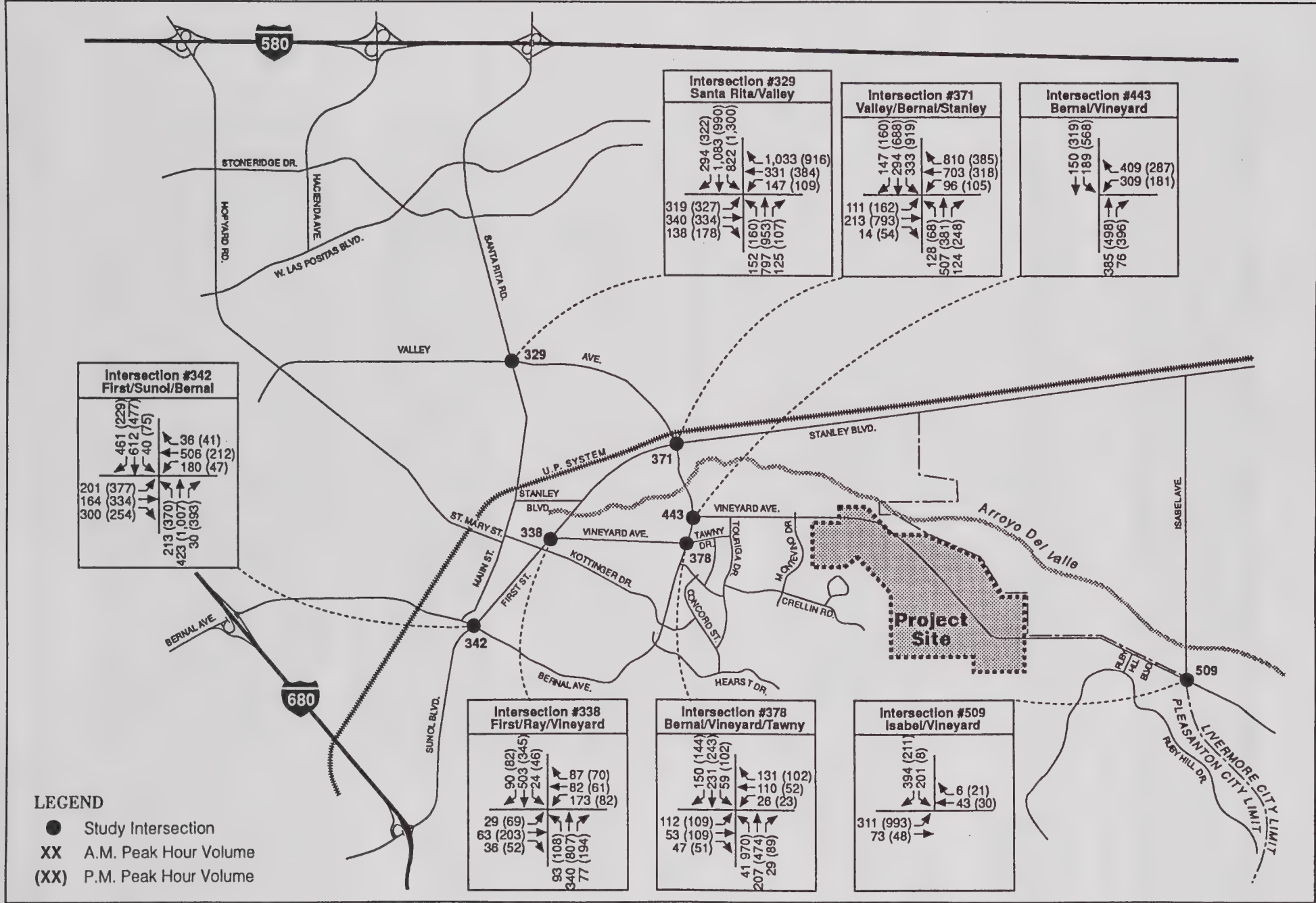
Impact
4.7-1

Level of Service with the Proposed Project. Traffic generated by the development of the proposed project would not degrade levels of service at any of the study intersections. No significant impacts would be anticipated.

Exhibit 4.7-7 illustrates the traffic volumes generated from the proposed project added to existing plus approved volumes at each of the study intersections. The results of the intersection level of service analysis are summarized in Table 4.7-3. Detailed level of service calculations are contained in Appendix B.

Table 4.7-3
Peak Hour Intersection Levels of Service - Short-Term Future Conditions

ID	Intersection Location	Intersection Control	Peak Hour	Existing		Existing + Approved		Existing + Approved + Project	
				V/C ¹	LOS	V/C ¹	LOS	V/C ¹	LOS
329	Santa Rita Road/ Valley Avenue	Signalized	AM PM	0.64 0.81	B D	0.80 0.79	C C	0.80 0.81	C D
338	First Street/ Ray Street/ Vineyard Avenue	Signalized	AM PM	0.59 0.80	A C	0.60 0.82	A D	0.61 0.83	B D
342	First Street/ Sunol Boulevard/ Bernal Avenue	Signalized	AM PM	0.61 0.60	B A	0.73 0.76	C C	0.73 0.76	C C
371	Bernal Avenue/ Stanley Boulevard	Signalized	AM PM	0.83 0.81	D D	0.85 0.83	D D	0.85 0.83	D D
378	Bernal Avenue/ Vineyard Avenue/ Tawny Drive	Signalized ²	AM PM	0.54 0.53	A A	0.49 0.54	A A	0.51 0.55	A A
443	Bernal Avenue/ Vineyard Avenue E.	Signalized ²	AM PM	0.51 0.58	A A	0.59 0.79	A C	0.64 0.85	B D
509	Isabel Avenue/ Vineyard Avenue	One-Way STOP	AM PM	7.5 5.5	B B	18.2 8.0	C B	21.4 8.3	D B
¹ Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicle for the delayed movements at unsignalized intersections. ² Intersection is currently unsignalized but is planned for eventual signalization. To ensure a consistent comparison with future scenarios, signalization is assumed.									
Source: TJKM 1998									



Source: TJKM, 1998.

Existing Plus Approved Plus Project Traffic Volumes

EXHIBIT 4.7-7

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 6/98

Under *Existing Plus Approved Plus Project* conditions as under the previous scenario “baseline” (existing plus approved projects), all of the seven study intersections are expected to operate acceptably at LOS D or better. The unsignalized intersection of Isabel Avenue and Vineyard Avenue will continue to operate at acceptable levels of service. As under *Existing Plus Approved Development* conditions, the conflict between the side street and major street traffic continue to meet Caltrans signal warrants for peak hour volumes.

Impact
4.7-2

Pedestrian and Bicycle Circulation. The proposed project would improve pedestrian and bicycle circulation in the local area. No significant impacts would be anticipated.

The project proposes to maximize opportunities to establish a substantial pedestrian, bicycle, and equestrian trail system throughout the Plan Area. The trail system would attempt to connect residential areas to open space areas, and existing and future recreational and public facilities, including the proposed community park and elementary school. The proposed realignment of Vineyard Avenue north along the Arroyo del Valle would essentially eliminate the need for pedestrians and bicyclists to cross a high-speed arterial street, Vineyard Avenue, to travel within or outside the Plan Area. This would assist in providing a safe and convenient circulation system for pedestrians and bicyclists.

Specifically, the realignment would allow the proposed elementary school to be located south of Vineyard Avenue eliminating the concern of having elementary school students cross a high-speed arterial.

The Plan Area is immediately adjacent to the future location of a portion of the District's Shadow Cliffs to Del Valle Regional Trail near the Arroyo del Valle. The proposed project would not obstruct the trail alignment and would provide adequate access for both trail users and emergency and maintenance vehicles.

Impact
4.7-3

Increased Vehicle Traffic on Vineyard Avenue. The proposed project would increase vehicle traffic on Vineyard Avenue. This increase would not exceed the roadway's available capacity. Also, it would not affect site distance at the four-way stop intersection of Vineyard Avenue and El Capitan Drive/Montevino Drive. This would be considered a less-than-significant impact.

The City of Pleasanton General Plan classifies Vineyard Avenue as an arterial roadway. This classification indicates that the function of Vineyard Avenue is to carry “through” traffic to other major arterials and freeways and provide access to adjacent land uses, mostly at intersections with traffic controls. In general, the primary function of arterials is to provide for movement of intercity and long intracity trips. The secondary function of arterials is to provide land access. Typical desirable operating speeds on arterials are 40 to 45 miles per hour (mph) during the off-peak periods and 30 to 35 mph during peak periods. Speed limits on all roadways, including arterials, are established based on methods required by the State of California Vehicle Code. Speed limits should be set at the first five-mile-per-hour increment below the existing 85th-percentile speed (which is defined as the speed at or below

which 85 percent of traffic on a given facility moves under “free-flow” conditions). However, existing traffic safety factors (such as accident history, safe stopping sight distance, and pedestrian traffic) may justify the need for an additional reduction of five miles per hour. The 85th-percentile speed is generally thought to represent the speed that is reasonable and safe to most drivers on the road. Speed limits set lower than the 85th-percentile speed are usually deemed unreasonable, and therefore, are violated by a higher proportion of drivers.

Two of the basic variables that can be used to describe the operations of any given roadway facility are speed and volume, which generally have an inverse relationship under uncongested conditions. As the traffic volume increases on a roadway, speeds begin to decrease due to the added interactions of vehicles on the roadway. The decrease in speed is negligible at low and medium volume levels. However, as volume levels approach the roadway capacity, speed significantly decreases.

This basic relationship between speed and volume is expected to hold for Vineyard Avenue as traffic volumes grow. The existing traffic volume of 8,100 vehicles per day (vpd) on Vineyard Avenue just east of Bernal Avenue is well under the typical operational capacity of 30,000 vpd for a four-lane divided road. Residents are concerned with perceived speeding on this roadway. However, as traffic volumes on Vineyard Avenue increase, average speeds are expected to decrease.

Traffic Volume Composition

Existing and future developments contributing traffic to Vineyard Avenue were evaluated to determine how the composition of traffic on Vineyard Avenue changes over various land use scenarios. For purposes of this evaluation, traffic on Vineyard Avenue is classified as either “local Pleasanton”, “Ruby Hill”, “other Pleasanton”, or “intercity cut-through.” “Local Pleasanton” traffic is defined as traffic generated by residential developments east of Bernal Avenue and west of the Ruby Hill area of Pleasanton. Traffic generated by the proposed project is evaluated as “local Pleasanton” traffic. Although the Ruby Hill development is located in Pleasanton east of Bernal Avenue and just west of the Livermore City limit, “Ruby Hill” traffic is separated from “local Pleasanton” traffic. “Other Pleasanton” traffic is defined as traffic with an origin or destination in Pleasanton other than the residential developments east of Bernal Avenue or the Ruby Hill development. “Intercity cut-through” traffic is defined as traffic, without an origin or destination in Pleasanton, traveling on Vineyard Avenue to bypass congestion on I-580 and State Route 84.

Currently, typical daily traffic volumes on Vineyard Avenue range from approximately 8,100 vpd east of Bernal Avenue to 2,500 vpd east of Montevino Drive to 4,600 vpd west of Isabel Avenue. Based on a review of the recent City-wide study of “intercity cut-through” traffic, it is estimated that roughly 1,000 vpd on Vineyard Avenue are “intercity cut-through” trips. Based on an existing inventory of the number of residences east of Bernal Avenue and west of the Ruby Hill area as well as a survey of residential traffic patterns in this area, it is estimated that about 5,500 vpd just east of Bernal Avenue, 100 vpd just east of Montevino Drive, and 1,100 vpd just west of Isabel Avenue are “local Pleasanton” trips. It was consequently estimated that 2,500 vpd are “other Pleasanton” trips between Pleasanton and Livermore. These existing traffic volumes do not include “Ruby Hill” traffic. The percentage of “local Pleasanton” traffic on Vineyard Avenue is summarized in Table 4.7-4.

Table 4.7-4
Existing Daily Traffic volumes on Vineyard Avenue

Vineyard Avenue Roadway	Existing Daily Traffic Volumes on Vineyard Avenue	Estimated Percent of "Local" Pleasanton Traffic
East of Bernal Avenue	8,100	60%
East of Montevino Drive	2,500	5%
West of Isabel Avenue	4,600	25%

It should also be noted that the recent, but temporary, reduction in lanes from two to one in each direction on Stanley Boulevard, due to storm damage, has resulted in some shifting of Livermore-bound traffic from Stanley Boulevard to Vineyard Avenue. Based on a comparison of turning volume counts conducted in 1996 and 1998 at Bernal Avenue/Vineyard Avenue and Isabel Avenue/Vineyard Avenue, some 220 additional eastbound vehicles are assumed to have shifted to Vineyard Avenue during the p.m. peak hour. However, these vehicles are expected to shift back to Stanley Boulevard once it is repaired.

With the addition of traffic generated by approved development, volumes on Vineyard Avenue are expected to be approximately 14,100 vpd east of Bernal Avenue, 8,700 vpd east of Montevino Drive, and 7,200 vpd west of Isabel Avenue. "Intercity cut-through" traffic volumes are not expected to significantly increase above existing levels because Stanley Boulevard, an alternative, parallel cut-through route will remain more attractive than the comparatively circuitous Vineyard Avenue route. The largest growth in traffic on Vineyard Avenue will be due to "Ruby Hill" traffic. The percentages of "local Pleasanton" and "Ruby Hill" traffic on Vineyard Avenue are summarized in Table 4.7-5 for the Existing plus Approved scenario.

Table 4.7-5
Existing Plus Approved Daily Traffic volumes on Vineyard Avenue

Vineyard Avenue Roadway Segment	Existing + Approved Daily Traffic volumes on Vineyard Avenue	Estimated Percent of "Local" Pleasanton Traffic	Estimated Percent Ruby Hill Traffic
East of Bernal Avenue	14,100	35%	25%
East of Montevino Drive	8,700	<5%	40%
West of Isabel Avenue	7,200	15%	20%

With project traffic added, volumes on Vineyard Avenue would increase to about 15,500 vpd near Bernal Avenue, 10,000 vpd near Montevino Drive, and 7,600 vpd near Isabel Avenue. The percentages of “local Pleasanton” traffic, including project traffic, and project-only traffic on Vineyard Avenue are summarized in Table 4.7-6 for the Existing plus Approved plus Project scenario.

Table 4.7-6 Existing Plus Approved Plus Project Daily Traffic Volumes on Vineyard Avenue			
Vineyard Avenue Roadway Segment	Existing + Approved Daily Traffic volumes on Vineyard Avenue	Estimated Percent of “Local” Pleasanton Traffic	Estimated Percent Project-Only Traffic
East of Bernal Avenue	15,500	45%	10%
East of Montevino Drive	10,000	15%	15%
West of Isabel Avenue	7,600	20%	5%

The existing roadway capacities on various segments of Vineyard Avenue are summarized in Table 4.7-7.

Table 4.7-7 Existing Roadway Capacities on Vineyard Avenue		
Vineyard Avenue Roadway Segment	Vineyard Avenue Capacity	
	Existing	With Project
Bernal Avenue to Montevino Drive	30,000	30,000
Montevino Drive to Pietronave Lane	15,000	15,000
Pietronave Lane to west of Ruby Hill Boulevard	10,000	15,000
West of Ruby Hill Boulevard to Isabel Avenue	15,000	15,000

Vineyard Avenue through the Plan Area is currently a narrow two-lane road. The posted speed limit is 40 mph. With the development of the proposed project, this segment of Vineyard Avenue would remain a two-lane arterial, although it would be realigned and widened. The proposed realignment to the north would enhance traffic flow on Vineyard Avenue by minimizing the number of the project’s internal vehicle trips that would need to cross Vineyard Avenue (for example, to access the proposed elementary school and commercial components of the project), and thus interrupt through traffic on Vineyard Avenue. In addition, bicycle and pedestrian traffic, specifically school children, would not need to cross an arterial roadway. The widening would add left-turn lanes, thus increasing the capacity

of Vineyard Avenue from 10,000 vpd to 15,000 vpd and allowing through vehicles to safely bypass stopped and turning vehicles. These Specific Plan measures would minimize any potential project impacts due to increased vehicle traffic on Vineyard Avenue to less-than-significant levels.

The “With Project” capacities of Vineyard Avenue would be adequate to accommodate future traffic under all land use scenarios.

Sight Distance

A growing concern is the adequacy of sight distances on the eastbound approach lane of Vineyard Avenue at its unsignalized intersection with El Capitan Drive/Montevino Drive. El Capitan Drive/Montevino Drive lies west of the project site. At this location, Vineyard Avenue has already been widened to a five-lane road. The speed limit is 40 mph which is equivalent to a design speed of 45 mph. The intersection of El Capitan Drive/Montevino Drive/Vineyard Avenue currently is controlled by an All-Way STOP.

The available sight distance was measured between this intersection and the eastbound approach on Vineyard Avenue. This proved to be 600 feet which is more than adequate to conduct safe turning movements to and from Montevino Drive. Minimum stopping sight distance recommended by the American Association of State Highway and Transportation Officials (AASHTO) requires 325 to 400 feet for flat grades and design speed of 45 mph. Even less is required for traffic on an approaching upgrade such as this case.

Concern over this intersection is justifiable. Even though there is sufficient sight distance, motorists are misled into thinking otherwise. There is a vertical curve in Vineyard Avenue. Motorists on Montevino Drive have a limited sight of the roadway pavement before it disappears from sight. This would make motorists assume that they also cannot see an approaching vehicle beyond this point. However, a vehicle would be higher than the road and can be seen from about 600 feet away. Vineyard Avenue already has All-Way STOP-control and advance STOP warning signs for the El Capitan Drive/Montevino Drive intersection in both directions and this should be sufficient to deal with the concerns over this intersection. No significant impacts would be anticipated at this intersection.

Impact
4.7-4

Cut-through Traffic. The increase in traffic associated with the proposed project could increase local neighborhood cut-through traffic. However, because the City has identified a Neighborhood Traffic Calming Program (NTCP) for the existing residential neighborhood generally bounded by Vineyard Avenue on the north and Bernal Avenue on the west, significant increases in cut-through traffic would not be anticipated.

In the past residents of existing residential neighborhoods have expressed concern about local "cut-through" traffic. Cut-through traffic is traffic that “short-cuts” through neighborhoods on local or collector streets instead of traveling around the neighborhood on arterial streets in order to by-pass congestion on these busier streets. Residents are concerned about eastbound vehicles that might use the Touriga Drive-Chardonnay Drive-Sauterene Way route to bypass a portion of the queue of

eastbound vehicles on Vineyard Avenue at its STOP-controlled intersection with El Capitan Drive/Montevino Drive. In the past residents have also identified potential cut-through routes to the Vineyard Avenue-Bernal Avenue arterial route, including the Montevino Drive-Crellin Road-Touriga Drive-Concord Street-Hearst Drive route and the Touriga Drive-Concord Street-Hearst Drive route.

Due to these concerns, the City of Pleasanton is involved in the information-gathering phase of a Neighborhood Traffic Calming Program (NTCP) for the existing residential neighborhood generally bounded by Vineyard Avenue on the north and Bernal Avenue on the west. An NTCP is a standard process that the City uses to address neighborhood traffic concerns, including speeding and cut-through traffic. An NTCP is typically initiated if routine traffic control measures, including enforcement, monitoring, and signing, cannot adequately address existing problems. Once the necessary neighborhood support is obtained and priority is assessed for the program, a series of city/neighborhood meetings will be held to identify existing problems and select appropriate traffic-calming techniques from the City's Traffic Calming Toolbox. These techniques include street narrowing (medians, entry islands, curb extensions), vertical alignment changes (raised crosswalk, speed bump, raised intersection), horizontal alignment changes (realigned intersection, curvilinear street, traffic circle), and street closures and diverters.

Based on the consensus of the neighborhood meeting participants, City staff will develop a traffic calming plan for the neighborhood. The plan, including construction cost estimates and anticipated funding strategies, would be reviewed by the neighborhood and subsequently submitted to the City Council for approval. After City Council action on the conceptual plan, final engineering plans and specifications can be prepared by City staff and submitted to the neighborhood for review. Once the above process is completed, the plan can be implemented. The implementation of the NTCP would ensure that potential cut-through traffic from the project site would not significantly affect the existing residential neighborhoods.

Impact
4.7-5

Bernal Avenue Arroyo del Valle Bridge. Traffic generated from buildout of the General Plan may require a second bridge to be constructed on Bernal Avenue to cross the Arroyo del Valle. Development of the proposed project would contribute to this need. This would be considered a potentially significant impact.

The City has identified the potential need for a second bridge on Bernal Avenue to cross the Arroyo del Valle with the buildout of the General Plan. The capacity of the existing two-lane bridge is 850 vehicles per hour per lane (vphpl). Currently, the peak hourly traffic volume of 408 (vphpl) occurs in the northbound direction during the a.m. peak hour. With the addition of approved development traffic, the peak would increase to 800 vphpl in the southbound direction during the p.m. peak hour. With the addition of project traffic, the peak flow would further increase to 887 vphpl in the southbound direction during the p.m. peak hour. The proximity of the bridge to the traffic signal proposed to be installed by the City at the intersection of Vineyard Avenue and Bernal Avenue is critical during the p.m. peak hour because south bound vehicles queuing at the intersection would extend across the single lane bridge. An additional lane would be necessary to store and move these vehicles if p.m. peak hour traffic volumes exceed the capacity of the bridge. The traffic generated by the development of the proposed project might trigger the need for a second bridge, depending upon the

level of approved development that occurs in the future. With or without the project, however, the need for a second bridge would be triggered with the buildout of the General Plan.

4.7.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.7-5
mitigation

Bernal Avenue Arroyo del Valle Bridge.

The City shall contribute the pro-rata Plan Area cost-share funding to construct a second bridge for Bernal Avenue to cross Arroyo del Valle, if and when the City determines that such a bridge is necessary.

4.7.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

4.7.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the above mitigation measures, all project impacts on transportation facilities would be reduced to less than significant.

4.8 PUBLIC SERVICES

The following is a discussion of the public services provided in the Plan Area and the impacts on these services associated with site development. The public services evaluated in this section include fire protection, police protection, parks and recreation, water supply, wastewater service and treatment, and schools.

4.8.1 FIRE PROTECTION

EXISTING CONDITIONS

Livermore-Pleasanton Fire Department

The Livermore-Pleasanton Fire Department (LPFD) is responsible for fire protection and suppression services within the City of Pleasanton. The LPFD currently has 99 firefighters in 10 fire companies serving a residential population of approximately 130,000 (Gary, pers. comm., 1998). Fire companies are comprised of 3 to 4 firefighters. The LPFD has 3 shifts, ensuring that a minimum of 32 firefighting personnel are on call at all time. The current budget is approximately \$13 million annually. The LPFD has mutual aid agreements with all fire departments in Alameda County, including the California Department of Forestry. A mutual aid agreement is an agreement whereby neighboring jurisdictions provide back-up and additional resources in an emergency or event that is beyond the LPFD's ability to handle on its own. The LPFD also has contracts with the Alameda County Fire Department for some areas of the unincorporated County, south and southwest of the current Pleasanton City limits.

Fire protection services in the City of Pleasanton are evaluated and rated by the Insurance Services Office (ISO). The ISO ratings for cities establish the fire insurance rates paid by local residents and business (City of Pleasanton 1996). Ratings are based on a variety of factors including water supply, fire department equipment, personnel, operations, communication systems, etc. The LPFD currently has an ISO rating of 3 (on a scale of 1 to 10 with 1 being the highest) (Carlson, pers. comm., 1998).

The LPFD has four stations in Pleasanton. Station 1/4, located at 4444 Railroad Avenue, is currently staffed with seven on-duty personnel and equipped with two pumper companies, a wildland interface unit and a reserve ladder truck. A new Station 1 is proposed for construction at the intersection of Valley Avenue and Bernal Avenue. Four firefighters and one pumper company will be relocated from the existing Station 1/4 to the new facility. A new Station 4 headquarters is proposed for construction in 1999 just east of the intersection of Del Valle Parkway and Bernal Avenue. This station will be staffed with three personnel and equipped with one pumper company and one wildland unit relocated from the existing Station 1/4.

Station 2 is located at 6300 Stoneridge Mall Road and is staffed with four personnel and equipped with one pumper company, a wildland interface unit, and a hazardous materials unit. Station 3, at 3200 Santa Rita Road, is staffed with three personnel and equipped with one pumper company, a wildland patrol unit, and a rescue squad vehicle. Station 5 (Ruby Hill Station), located at 1200 Vineyard Avenue immediately adjacent to the eastern boundary of the Plan Area, is staffed with three personnel

and equipped with one fire pumper and a wildland patrol unit. Station 9 is located in southwest Livermore and has a pumper with three personnel, a wildland interface unit and a rescue squad.

The Ruby Hill Station would provide first response to any fire or emergency occurring within the Plan Area. First response time is defined as the time necessary for firefighting staff and equipment from the station nearest the location of the emergency call to arrive on the scene. The LPFD's desired first response time goal is 5 minutes or less. Firefighting personnel from the Ruby Hill Station would be able to respond to the site in less than 5 minutes. Upon its completion, personnel from the new Station 4 would also respond within this threshold (Carlson, pers. comm., 1998).

The minimum fire flow required for the Plan Area varies depending on topography and existing or proposed land use. Fire flow is the amount of water expressed in gallons per minute available to control a fire. Subarea 1 requires 2,000 gallons per minute (gpm) at 20 pounds per square inch (psi) to accommodate the existing nursery/commercial building located on Lot 1. Minimum fire flow for Subareas 2 and 3 is 1,500 gpm at 20 psi (the City's minimum fire flow for residential areas). The elementary school proposed in Subarea 2 would require a minimum fire flow of 2,250-2,500 gpm at 20 psi (Gary, pers. comm., 1998). Similar fire flow requirements would likely be required for any commercial buildings. No public fire fighting facilities or fire hydrant systems currently exist within the Plan Area.

Pleasanton Growth Management Program

The City of Pleasanton has adopted a Growth Management Program (GMP), which is intended to ensure the adequacy of city facilities and services to serve new development as it occurs. This program relies on the regulation of construction phasing and timing to assure that facilities are available commensurate with development. The proposed project would be subject to the provisions of the GMP.

Wildfire Risk

The City of Pleasanton General Plan Public Safety Element addresses both urban and wild fire hazards. According to Figure V-6, "Wild Fire Risk Areas," a portion of the proposed Plan Area on the south side of Vineyard Avenue is designated as having a "high hazard" wild fire risk designation (City of Pleasanton 1996). Ridgelines in the Plan Area are designated as "extreme hazard" areas. These designations can be attributed to the combination of steep topography and flammable vegetation (grasses, brush and oak woodland).

Relevant General Plan Policies and Programs

The Pleasanton General Plan Public Safety Element contains the following policies and programs relevant to fire protection and hazards in the Plan Area.

Policy 10 Strive to respond to all fire calls within five minutes.

Program 11.2 Require that all new developments be provided with sufficient fire flow facilities at the time of development at least at the level specified by the Fire Chief.

Policy 13: Require fire mitigation measures in new developments proposed, and require additional mitigation for those developments outside of the five-minute response time zones as determined by the Fire Chief.

Program 13:2 Require automatic fire sprinklers in all structures required in the Uniform Building Code in addition to all structures of 8,000 square feet and greater and all structures located in fire hazard areas.

Program 13:3 Ensure that all buildings be accessible to fire vehicles and fire fighting equipment.

Program 13:5 Require a greater degree of fire resistivity in roof covering for buildings within hazardous areas.

Program 13:8 Require fire breaks, green areas/"wetblankets," and/or greater building setbacks adjacent to unmaintained open space areas.

The Pleasanton General Plan Public Facilities Element also contains the following Program relevant to fire protection.

Program 4.4 Maintain water pressure at sufficient levels to serve residential, commercial, industrial, and fire flow requirements as determined by the City Engineer.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

A significant impact to fire services would occur with either of the following:

- ▶ Development that would result in an unacceptable level of fire protection service or fire flows to the service area; or
- ▶ The proposed development would not be consistent with the public service policies of the Pleasanton General Plan.

Fire Protection Impacts

Impact
4.8-1a

Increased Demand for Fire Protection Services. Development of the Plan Area with urban uses would increase the demand for fire protection services in the City of Pleasanton. The LPFD currently has a station located immediately east of the Plan Area that is adequately staffed and equipped to provide service to the Plan Area in less than 5 minutes. In addition, the City of Pleasanton has adopted a Growth Management Program to ensure that City facilities are constructed to keep pace with new development. Therefore, the increased demand for fire protection services associated

with the proposed project would be considered a less-than-significant impact.

Development of the Plan Area would introduce new structures and people requiring fire protection services. This would increase the demand for fire protection services on the project site as well as overall demand on the LPFD. The recently constructed Ruby Hill Station is located immediately east of the Plan Area and the LPFD is currently constructing a new station (Station 1) and plans to build a new Headquarters (Station 4) in 1999. Funding for fire protection services is provided from the City's general fund. Residential uses proposed for the Plan Area would result in increased property taxes. Increased revenues to the City's general fund could be allocated to the LPFD to increase staffing thereby off-setting any additional firefighting demands created by the proposed project.

In 1978, the City of Pleasanton adopted a Growth Management Program (GMP) intended to ensure the adequacy of City facilities and services to serve new development. The GMP relies on the regulation of construction phasing and timing of new development to assure that facilities are available commensurate with demand. The Specific Plan is consistent with General Plan Public Safety Element Policy 8 (Provide an adequate level of fire equipment and personnel to protect the community) and the policies of the GMP. Therefore, impacts to fire protection equipment and facilities would be considered less than significant.

Impact
4.8-lb

Exposure to Wildland Fire Risks. The General Plan identifies slopes and ridgelines in the Plan Area as "high" and "extreme" fire hazard areas. Construction of residential uses in the Plan Area could potentially expose people and property to increased wildland fire risks. The LPFD has concerns regarding access to steep portions of the Plan Area as well as vegetation management around residential structures. Therefore, potential wildland fire impacts associated with development of the Plan Area would be considered potentially significant.

The City of Pleasanton General Plan Public Safety Element identifies wildland fire risk areas throughout its boundaries. The LPFD has indicated that the proposed project represents a "residential intrusion" into a wildland area (Gary, pers. comm., 1998). The Plan Area is located within an area designated as having "high" and "extreme" fire hazards on General Plan Public Safety Element Figure V-6, "Wild Fire Risk Areas." Locating homes adjacent to open space areas could potentially expose residents and property to an excessive risk of a wildland fire. Conversely, the introduction of residential uses adjacent to undeveloped, open space areas could increase the potential for man-made fires to spread to wildlands (e.g., sparks from gasoline operated equipment, smoking, etc.). Possible increased wildland fire hazards would be considered a potentially significant impact.

The LPFD would provide first response to the Plan Area from the Ruby Hill Station. However, the LPFD has identified concerns regarding access to portions of the project site south of the existing Vineyard Avenue. Slopes in excess of 15% on the site exceed the LPFD's maximum angle of ascent. Residential structures located in areas with slopes greater than 15% may not be accessible with conventional fire fighting vehicles and equipment during a wildland fire. This would be considered a potentially significant impact.

Impact
4.8-1c

Provision of Fire Flow. The Plan Area would be served by existing water conveyance infrastructure with additional distribution lines, pumps and water storage facilities. Adequate water supply is proposed to meet fire flow requirements for the Plan Area. However, 5 existing and 7 proposed residential structures above elevation 540 feet may not be able to meet required fire flow pressure requirements. The possible lack of adequate water pressure for these structures would be considered a potentially significant impact.

The provision of fire flow is dependent upon having a reliable supply of water that is capable of meeting certain pressure requirements. (A full discussion of water storage, supply and infrastructure is provided in Section 4.8.4, Water Supply). The LPFD indicates that a minimum fire flow for commercial and residential development is 2,000 gallons per minute (gpm) at 20 pounds per square inch (psi). These requirements are currently met at the nursery/commercial development in Subarea 1. However, because much of the remaining Plan Area is not serviced with City water, adequate fire flow is not currently available for future development in Subareas 2 and 3.

A 36-inch Zone 7 pipeline was constructed in Vineyard Avenue in 1993. This would be the primary source of water to the Plan Area. A new 16-inch water trunk line is proposed for construction within the existing Vineyard Avenue right-of-way. The line would extend from a pump station (proposed for construction next to the Ruby Hill Fire Station) westerly connecting to the existing Bonde Zone (one of the City's water pressure zones ranging from 390 feet to 540 feet in elevation) trunk line near Montevino Drive. Hydrants would be installed along this new line at locations as approved by the LPFD. Secondary distribution would extend short distances south from the main trunk line to provide water service to the Plan Area. In addition, a new Bonde Zone storage tank would be constructed near elevation 636 at the rear lot line of Lot 24. The tank would provide adequate domestic service and sustained fire flow capability for the majority of the Plan Area.

Despite the City's proposed improvements, domestic pressure requirements cannot be met for 5 existing and 7 proposed lots located at elevations above the City's Bonde Zone upper limit of 540 feet. The domestic pressure requirement is 40 psi at building pad elevations. The inability to achieve domestic water pressure requirements would make achieving fire flow pressure requirements less reliable. The possible lack of adequate domestic water pressure at these lots would be considered a potentially significant impact.

Impact
4.8-1d

General Plan Consistency - Response Time. The proposed Specific Plan Area can be serviced by emergency vehicles within 5 minutes consistent with Policy 10 of the Public Safety Element. No impacts related to consistency with desired response times would occur.

The Ruby Hill Station is located immediately east of the Plan Area on Vineyard Avenue. Due to its proximity, the station would have response times to the Plan Area below the LPFD's response time goal of 5 minutes. Upon its completion, the new Station 4 located west of the project area would have similar response times to the site (Carlson, pers. comm., 1998). Therefore, the Specific Plan would be consistent with the City's response time threshold as stated in General Plan Public Safety Element Policy 10 (Fire Hazards).

General Plan Consistency - Design Plans. The The Pleasanton Public Works Department and the LPFD review development plans prior to project approval and issuance of a building permit by the Building Inspection Department. All plans must be designed with adequate fire access, fire hydrants and water system designs in order to be approved for construction. Projects which do not meet LPFD requirements will either be denied or have conditions to mitigate potential impacts prior to approval. Compliance with these requirements would ensure that the Specific Plan is consistent with General Plan Public Safety Element Fire Hazard Policy 12 and Programs 8.2, 13.2, 13.3 and 13.8. No impact would be anticipated.

The LPFD is involved in reviewing all development plans prior to approval and issuance of a building permit by the Building Inspection Department. The LPFD makes recommendations to the Building Inspection Department if plans submitted do not meet fire flow requirements, provide emergency access, etc. Prior to receiving a building permit, the project applicant must modify plans in accordance with the directives of the LPFD or agree to comply with any actions attached as conditions of approval (e.g., installing onsite water tanks, removing dead vegetation, etc). In addition, the project applicant would be required to pay for any necessary fire safety improvements consistent with Program 8.2 of the General Plan Public Safety Element. Development in the Plan Area would be constructed using fire resistant materials (i.e., roofing) and sprinklers in keeping with the provisions of Public Safety Element, Policy 12 and Program 13.2. All lots located in hillside areas would be designed to allow adequate fire vehicle access consistent with Program 13.3. Residential lots adjacent to unmaintained open space would be designed with fire breaks to provide defensible space in case of a wildland fire consistent with Program 13.8. Therefore, implementation of the Specific Plan would not result in impacts related to consistency with the City's Public Safety Element Fire Hazard design policies and programs.

The potential development of the Plan Area with some commercial uses as an option to full 189 residential units would result in additional revenues to the general fund to offset any increased demand for firefighters. The Spa and Bed and Breakfast would be constructed on flatter portions of the Plan Area designated as "moderate hazard" on Figure V-6 "Wild Fire Risk Areas" of the Pleasanton General Plan Public Safety Element. Fire flows would be met through existing and proposed infrastructure as described in Impact 4.8-1c above and Section 4.8.4, Water Supply. The development would be served by the Ruby Hill Station within the 5 minute response time requirement. These uses would be required to meet LPFD requirements for adequate fire access, fire hydrants, etc., prior to approval. No significant General Plan inconsistencies would be anticipated with commercial development.

SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.8-lb
mitigation

Exposure to Wildland Fire Risks

New homes surrounded by Open Space land shall be protected through the use of fire breaks, removal of any vegetation and other material presenting potential fire hazards, and use of fire-retardant vegetation.

Emergency vehicle access shall be provided to open space areas as identified by the LPFD.

All residences located in areas with slopes greater than 15% shall be accessible from driveways designed to accommodate firefighting equipment. Driveways shall be a minimum of 16 feet wide and 20 feet clear. Driveways exceeding 150 feet shall be designed to allow a fire truck to turn around.

impact
4.8-lc
mitigation

Provision of Fire Flows

All homes located above elevation 540 shall be provided with an elevated onsite water storage tank (minimum 1,000 gallon capacity) subject to approval by the Fire Marshall to ensure adequate pressure for domestic use, fire sprinklers, and other approved fire systems.

ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the Specific Plan measures, the proposed project's impacts on fire protection services would be reduced to less than significant.

4.8.2 POLICE PROTECTION

EXISTING CONDITIONS

The Pleasanton Police Department provides police services within the Pleasanton city limits. The Department serves a population of 62,500 residents within its 21.7-square-mile service area (Helms, pers. comm., 1998). The service area is divided into five “beats,” or geographical areas defined by the number of calls for service that the Department receives. The higher the density of development, the more calls for service the Department typically receives. Consequently, urbanized areas are usually small beats, while low density and rural areas are larger beats. The Department occasionally readjusts beat boundaries based on growth and calls for service. The Plan Area is located in Beat 5, a large beat area due to the low-density residential areas it encompasses.

The Department headquarters is located at 4833 Bernal Avenue. The police force is comprised of both sworn officers and community services (i.e. non-sworn) officers. Currently, there are 81 sworn police officers and 5 community service officers (Helms, pers. comm., 1998). The Department has 21 patrol cars, 7 motorcycles and 4 pick-up trucks (used by community service officers). Between 14 and 17 patrol cars are on duty at any time, as well as 2 to 3 motorcycle patrols, during the day and afternoon shifts. Patrol vehicles are staffed with one officer. Patrols are conducted throughout the City on a 24-hour basis. Each patrol has three shifts (morning, afternoon and evening) and is managed by a lieutenant and supervised by two sergeants. The patrol is staffed commensurate with the demands of the specific area.

The Department has a response time goal of 18 minutes average for all calls and 4 minutes average for emergency calls. Currently, the Department’s average response time is 16.3 minutes for all calls and 3.6 minutes for emergency calls (Helms, pers. comm., 1998).

The Department has mutual aid agreements with the Alameda County Sheriff’s Department, the City of Dublin Police Department, and the City of Livermore Police Department. Under a mutual aid agreement, the Pleasanton Police Department would receive back-up assistant from these neighboring jurisdictions if an event were to occur that would exhaust the Department’s resources. Conversely, the Pleasanton Police Department would reciprocate with these jurisdictions if they requested help.

Relevant General Plan Policies and Programs

The following General Plan Public Safety Element Policy is relevant to the discussion of police protection:

Policy 20: Maintain and enhance, where feasible, the level of police equipment and personnel to protect the community.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

A significant impact on police protection services would occur if it would result in the following:

- ▶ An increase in the Department's response time above its goal of 4 minutes; or
- ▶ A substantial increase in the demand for police services.

Project Impacts

Impact
4.8-2a

Increased Response Times. Development of the Plan Area would increase the demand for police protection services. The Pleasanton Police Department currently responds to calls for emergencies throughout its service area in less than an average of 4 minutes. The Department has indicated that the Plan Area could be served within this threshold. Therefore, a significant reduction in the Department's response time would not be anticipated.

Development of the Plan Area with residential and potentially commercial uses would increase the demand on the Pleasanton Police Department for police protection services. Currently, the Department is able to respond to calls within its service area in 4 minutes or less and has indicated that the Plan Area could be served within this threshold as well (Helms, pers. comm., 1998). A significant reduction in the Department's response time in the local area would not be anticipated.

Impact
4.8-2b

Increased Demand for Police Services. Development of the Plan Area would increase the demand for police protection services. The Department recently hired additional officers specifically in response to growth in the southeastern portion of the City. Development within the Plan Area would benefit from the hiring of these officers. In addition, the increase in property tax revenues associated with Plan Area development could be used for additional staff resources, if required. The proposed project's impacts on police staffing would therefore, be considered less than significant.

Development of the Plan Area would increase the demand for police protection services. The Police Department recently hired additional officers in response to the growth in the southeastern portion of the City, specifically the Ruby Hill development. The Department has stated that the hiring of these officers would somewhat mitigate the increased demand generated with Plan Area development (Helms, pers. comm., 1998).

Funding for police protection services is provided from the City's General Fund. As new development occurs, property values rise, resulting in increased tax revenues for the General Fund. The Department assesses its staffing needs based on calls for service on a monthly basis. If additional officers are required, the Department would submit a request and justification to the City Manager to apportion

additional General Fund monies for police protection (Rossi, pers. comm., 1998). Because a mechanism is in place to provide additional police services when needed and additional officers have recently been hired to patrol the Plan Area, the increased demand anticipated with Plan Area development is not expected to result in significant impacts.

SPECIFIC PLAN MEASURES

No Specific Plan measures would be necessary for police protection services and none are proposed.

ADDITIONAL MEASURES

No additional measures would be necessary for police protection services.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant impacts on police protection services would be anticipated with development of the Specific Plan Area.

4.8.3 PARKS AND RECREATION

EXISTING CONDITIONS

Park and recreation facilities throughout Pleasanton are owned and operated by both the City and the East Bay Regional Parks District (EBRPD). The EBRPD provides regional parks and interpark trails to Contra Costa and Alameda counties. Pleasanton and the EBRPD work cooperatively to provide integrated facilities that will serve the local community.

Pleasanton's park system consists of 23 neighborhood parks on a total of 125 acres, 11 community parks on a total of 192.8 acres, and 315.4 acres of open space parks (City of Pleasanton Parks and Community Services 1998). A total of 633.2 acres of parkland exist within the City. Approximately 160 acres of new parks or park expansions are anticipated within the next 10 years (Wolfe, pers. comm., 1998). The City also has an extensive network of hiking trails and bikeways. The General Plan Circulation Element, Figure III-9, designates a series of trails along Arroyo Mocho, Arroyo del Valle, Arroyo de la Laguna, and extending into the Southeast Hills and Pleasanton Ridge areas. These trails are integrated into the EBRPD's 1,000-mile trail system, providing links in all directions (City of Pleasanton 1996).

Two EBRPD regional parks are located within the city limits. One of these facilities, the Shadow Cliffs Regional Recreation Area is located along Arroyo del Valle, northwest of the Plan Area. This 249-acre recreation area includes boating, picnicking, hiking, fishing, and water slide facilities. Vintage Hills Park is the closest neighborhood park to the Plan Area, which is located approximately 0.75 mile to the southwest.

The State Quimby Act authorizes cities to require the dedication of land for park facilities or the payment of in-lieu fees, as a condition of approval of certain subdivision projects. In accordance with the provisions of the Quimby Act (Government Code §66477), the City of Pleasanton Park Dedication Ordinance requires all new developments to either dedicate a minimum of 5 acres of park land for every 1,000 increase in population, or pay in-lieu fees of \$4,009 per single-family residence or \$2,919 for multi-family units (Wolfe, pers. comm., 1998). In-lieu fees are based on current market values of land sold for residential development.

The *City of Pleasanton Municipal Facilities Master Plan* (Daniel C. Smith and Associates 1990) recommends acreage standards for parkland dedication by category per 1,000 population. Based on an estimated General Plan buildout of 74,500 residents in 2004 or later, the City of Pleasanton desires to achieve a system-wide mix of 160 acres of Neighborhood Parks (2 acres per 1,000), 240 acres of Community Parks (3 acres per 1,000), and 80 acres of Open Space Parkland (1 acre per 1,000).

Based on its current population of 62,500, the land dedicated for parks and recreational facilities in the City of Pleasanton exceeds both the acreage required in the Quimby Act and the City's goal for park acreage.

Relevant General Plan Policies and Programs

The following General Plan Open Space and Conservation Element (1996) Policies and Programs provide direction regarding parks and recreational facilities within the City.

- Policy 11 Provide sufficient parkland and recreation opportunities to accommodate existing and future needs of residents, workers and visitors.
- Policy 12 Promote the development of bicycle, equestrian, and hiking trails throughout the Planning Area.
- Program 12:1 Develop a system of bicycle, equestrian, and hiking trails in accordance with Figure III-9 of the Circulation Element.
- Program 12:5 Encourage developers to dedicate public access easements in private open space areas to facilitate the system of trails in Pleasanton shown on Figure III-9 of the Circulation Element.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

A significant impact on parks and recreational facilities would occur if the proposed project results in one or more of the following:

- ▶ Less than 5 acres of developed parkland is dedicated for every 1,000 in project population generated; or
- ▶ An inconsistency occurs with the park and recreation goals and policies of the City of Pleasanton General Plan, including the trail requirements.

Project Impacts

Impact
4.8-3a

Provision of Adequate Park Facilities. Development of the proposed Specific Plan would result in the demand for approximately 3 acres of parkland based on the Quimby Act requirement of 5 acres of developed or active parkland for every 1,000 population generated. Future developers within the Plan Area would be required to pay their fair share for parklands through the City's "In-Lieu Park Dedication Fee Ordinance". Also, twenty acres of the Plan Area are designated for a community park. This would satisfy the City's desired system-wide goal for community park acreage. No significant impacts on park and recreational facilities would be anticipated.

The residential uses associated with the proposed project would increase the local population by approximately 580 residents assuming 3.09 residents per single-family household (City of Pleasanton 1996). This equates to a demand for approximately 3 acres of parks. Future developers within the Plan Area would be required to pay their fair share for parklands through the City's "In-Lieu Park Dedication Fee Ordinance". In addition, the Specific Plan Area includes a 20-acre community park site on Lot 14. The amount of park land within the Plan Area would exceed Quimby Act requirements. The park would serve the residents of the Plan Area and residents of the surrounding community. Although conceptual design plans for the park have not been prepared, anticipated uses include picnic areas, trails, passive landscaped open space/buffer areas between the park and neighboring homes, and possibly limited, unlighted ball fields.

In addition to the park, approximately 6 acres of play fields are proposed on the northern portion of the proposed school site (portions of Lots 18 and 19). These play fields are anticipated to provide outdoor recreational opportunities for the school students and to meet the community's recreational needs during non-school hours.

Therefore, the amount of proposed parklands and recreational facilities would be more than adequate to accommodate the increased demand associated with the proposed project consistent with Open Space and Conservation Element Policy 11. No significant impacts to parks and recreational facilities would be anticipated.

Impact
4.8-3b

Consistency with General Plan - Trails. The Community Trails Master Plan contained in the Circulation Element of the City of Pleasanton General Plan identifies two proposed Class C trails and a staging area within the Plan Area. The Specific Plan accommodates the Class C trails through open space areas reserved as buffers for the intermittent drainages located on Lots 19, 22 and 26. A park is proposed on Lot 14, which would accommodate one of the trails and the staging area. Therefore, the proposed project would be consistent with the Community Trails Master Plan and the larger EBRPD trails system. No impacts related to General Plan consistency would occur.

The Community Trails Master Plan map (identified as Figure III-9 in the General Plan Circulation Element) designates trails as either Class A (regional connectors), Class B, or Class C (local collectors). The map also identifies scenic bicycle routes that provide access throughout the City, and staging areas. The map identifies two proposed Class C trails and a staging area within the Plan Area. The proposed Specific Plan would accommodate these trail routes. Connections to a regional connector along the realigned section of Vineyard Avenue would be made through open space corridors proposed on lots 19, 22 and 27. These corridors would be dedicated public access easements that also protect intermittent drainages flowing north into Arroyo del Valle. A 20-acre community park proposed on Lot 14 would provide the staging area that would access one of the Class C trails. The integration of trails into the Specific Plan supports Open Space and Conservation Element Goal 4 (achieve a complete park and recreation system), and is consistent with Program 12.1 and 12.5. The proposed project would also be consistent with the goals and policies of the General Plan Circulation Element Community Trails Master Plan.

SPECIFIC PLAN MEASURES

The Specific Plan, through the required payment of in-lieu park dedication fees by developers and the development of a 20-acre park site and public access easements to facilitate the system of trails identified in the Community Trails Master Plan, would ensure that adverse impacts on parks and recreational facilities would not occur.

ADDITIONAL MEASURES

No additional mitigation measures would be necessary.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant impacts on parks and recreational facilities would be anticipated with development of the Specific Plan Area.

4.8.4 WATER SUPPLY

EXISTING CONDITIONS

The discussion of water supply, storage, distribution and demand was developed through consultation with the City of Pleasanton and from the following documents: *Draft Environmental Impact Report for the Happy Valley Specific Plan and Related Planning and Development Actions* (February 1998); *1996 Growth Management Report* (City of Pleasanton 1996b), and *City of Pleasanton General Plan* (City of Pleasanton 1996a).

Water Supply

The City of Pleasanton Public Works Department, Water Division acquires and distributes water to all City customers and is responsible for securing adequate water supply, meeting strict quality standards, and maintaining all storage and distribution facilities. The City purchases water from the Alameda County Flood Control and Water Conservation District, Zone 7 (Zone 7) and augments this water with groundwater pumped from City wells. Pleasanton has historically obtained between 60 and 75% of its water supply from Zone 7 with the balance coming from its own wells (Mundie & Associates; City of Pleasanton 1997).

Zone 7

Zone 7 is the water wholesale provider to the Tri-Valley area. Its major customers are Pleasanton, the Dublin-San Ramon Services District (DSRSD), the City of Livermore and the California Water Service. Zone 7's sources of water include surface water runoff, local groundwater, and water imported from the State Water Project (SWP).

Surface water runoff in the Arroyo del Valle drainage area is estimated by Zone 7 to average 7,000 acre-feet per year (ac-ft/yr). This water is stored in the Del Valle Reservoir under contract with the State of California. The Del Valle Reservoir is anticipated to remain in use for the next several years but may be replaced by other storage facilities in the future (City of Pleasanton 1996b).

Local groundwater is available from several sub-basins in the Tri-Valley. The most important sub-basins are in the west-central area of the valley where the major Zone 7 and City wells are located. Zone 7 estimates the average yield of the groundwater basin, assuming maintenance of a stable aquifer, is 13,200 ac-ft (City of Pleasanton 1996b).

The State Water Project's water is pumped from the Sacramento-San Joaquin Delta via the California Aqueduct and is conveyed to the Tri-Valley area (i.e., unincorporated portions of Alameda and Contra Costa Counties, the Town of Danville, and the Cities of Dublin, Livermore, and San Ramon) via the South Bay Aqueduct (City of Pleasanton 1996a). Water from the Aqueduct is stored in the Del Valle Reservoir and is used by Zone 7 to replenish groundwater supplies through release into the Arroyo del Valle. Zone 7's contractual entitlement for water from the State Water Project from the South Bay Aqueduct was 42,000 acre-feet (ac-ft) in 1995 (City of Pleasanton 1996b). This contractual amount increased by 2,000 ac-ft/yr until a maximum of 46,000 ac-ft was reached in 1997.

For planning purposes, Zone 7 assumes a sustainable average annual supply of 54,200 ac-ft. The total supply would come from the following sources: 34,000 ac-ft from the SWP, 13,200 ac-ft from groundwater and 7,000 ac-ft from local run-off. (Table V.d-5, p. V.d-5, City of Pleasanton 1996b). Of this amount 43,200 ac-ft of water is available for municipal use. The remaining 11,000 ac-ft is intended for present and future agricultural, mining, untreated non-agricultural, and small institutional users (City of Pleasanton 1996b).

Zone 7 assumes an overall community consumption rate of 210 gallons per day per capita for planning purposes. Based on this consumption rate, 183,649 people could be served with Zone 7's estimated sustainable average municipal supply of 43,200 ac-ft. The existing general plans for the cities of Pleasanton, Livermore, and Dublin in the Zone 7 service area have a population potential of 188,000 people (City of Pleasanton 1996b). Thus, the total current Zone 7 supplies is less than the total demand that would be generated by the ultimate buildout of the general plans for Pleasanton, Livermore, and Dublin.

Implementation of best management practices and water conservation measures (e.g., low-flow toilets and drought tolerant landscaping) throughout the entire Zone 7 service area, would result in an average 10% reduction in normal consumption. With these measures the 40,900 ac-ft of current annual average supplies could meet the needs of approximately 192,000 people. As described above, the existing general plans for the cities of Pleasanton, Livermore, and Dublin (within the Zone 7 waster service area) have a population potential of 188,000 people within the Zone 7 water service area. Thus, the total current Zone 7 supplies (with a 10% conservation factor) exceed the total demand generated by the buildout of the general plans for Pleasanton, Livermore, and Dublin. These measures would serve to extend current water supplies. In addition, Zone 7 is also actively seeking new sources of water supply to meet anticipated future water requirements and to offset possible reductions of SWP deliveries. Reductions in SWP deliveries could result from long-term drought and/or environmental considerations including increasing in-stream flows and reducing withdrawals from surface waters in the Delta.

City of Pleasanton

Pleasanton supplements water purchased from Zone 7 with groundwater from four City owned wells. Groundwater is extracted from these wells in accordance with a pumping schedule approved by Zone 7 (City of Pleasanton 1996a). Pleasanton's annual groundwater entitlement is 3,500 ac-ft (an average of 3.1 million gallons per day (mgd)). This amount is fixed by a contract with Zone 7 acting as the regional groundwater basin manager of the Amador/Livermore Valley area and is subject to negotiation when its contract with Zone 7 is renewed (City of Pleasanton 1996b). City well water is disinfected and used to meet peak-usage periods in the summer months.

City Water System

The City's water system consists of an integrated network of pipes, pumps and storage tanks to provide adequate water delivery to its customers. A description of each aspect is provided below.

Water Storage/Pressure Zones

The City stores water in a series of tank reservoirs. These reservoirs allow the City to deliver water at a relatively constant rate over a 24-hour period, accommodate hourly demand fluctuations, and provide required fire flows and emergency reserves. Water is stored in tanks grouped by pressure zones. The City's Planning Area is divided into a total of 12 pressure zones: the Lower Zone, the Bonde Zone, the Foothill Zone, the 770 Golden Eagle Farm Zone, the Kilcare Zone, the Grey Eagle Zone, the Kottinger Ranch Zone, the Canyon Meadows Zone, the Foothill 2 Zone, the 770 Moller Ranch Zone, the 520 Foothill Zone, and the Ruby Hill Upper Zone (City of Pleasanton 1996a). The Lower Zone is the main pressure zone, representing 82% of total demand. Water is pumped from the Lower Zone to the next higher zones. Pumps in turn lift water from these zones to higher zones. Although water must be delivered through the Lower Zone (with the exception of Ruby Hill which is connected directly to the Zone 7 system), each zone must operate independently with its own pumping and storage facilities. To meet the City's projected 2020 storage needs, additional water storage reservoirs will be needed in both the Lower and Upper Zones (City of Pleasanton 1996a).

Pumps also play an important part in maintaining water pressure and volume throughout the City. Pressure and volume in the water system are maintained by pumping water to tanks located in the various pressure zones. Peak usage typically occurs in the mornings and evenings. Pumps generally run during the night (when water usage is minimal) to fill the tanks with water to meet daytime demands. In addition, the pumps will also run during the day to maintain adequate water volume and pressure whenever water in the tanks is drawn down.

Distribution System

Water from Zone 7 is conveyed from the Del Valle Water Treatment Plant (described below) via the Cross Valley Pipeline and the 36-inch Vineyard Pipeline (completed in 1993). The City distribution system ties into Zone 7 infrastructure at 6 turnouts (i.e., connections). From the turnouts, the City distributes treated water through a network of pipes sized to deliver water at sufficient volumes and pressure to service residential, commercial, and industrial users. Water pipes are located under most City streets to service residential, commercial and industrial customers. Numerous additional water pipes will be needed in order to meet the City's projected water use. Zone 7 turnouts currently have the capacity to supply approximately 37.3 million gallons of water per day (25.4 mgd from Zone 7, and 11.9 mgd from City wells) to the City (Mundie & Associates; City of Pleasanton 1998).

Water Treatment Capacity

Zone 7 has two water treatment plants: the Del Valle Water Treatment Plant and the Patterson Pass Water Treatment Plant. These two plants currently have adequate treatment capacity. Water from the South Bay Aqueduct is treated at these plants. Pleasanton receives treated water from the Del Valle Water Treatment Plant via Zone's 7 Cross Valley pipeline and the recently complete 36-inch Zone 7 Vineyard Avenue pipeline (City of Pleasanton 1996a).

Onsite Water Supply, Storage and Distribution

Existing uses in the Plan Area are currently served by small privately owned wells and piping systems.

City infrastructure is located south and west of the Plan Area. Development immediately south of the Plan Area is within the Grey Eagle Zone. Development to the west of the Plan Area is within the Bonde Zone. The Ruby Hill development to the southeast of the Plan Area is within the Bonde Zone and the Ruby Hill Upper Zone. The Ruby Hill Upper Zone is expected to be connected to the Bonde Zone as development occurs in the Vineyard Avenue Corridor (City of Pleasanton 1996b).

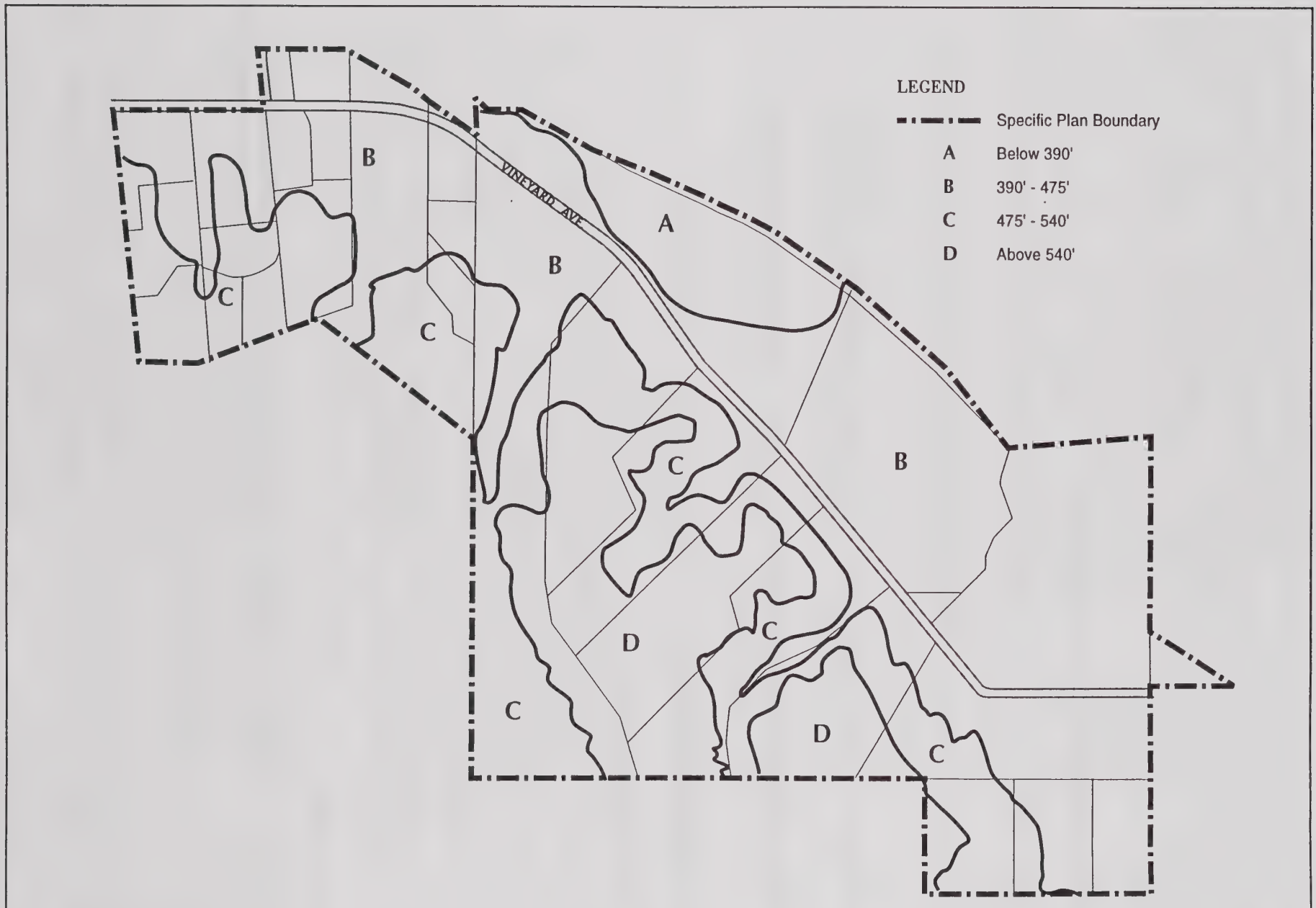
The majority of the Plan Area is located within the Bonde Zone. Bonde Zone pipelines are located near Subarea 1 of the Plan Area in Montevino Drive to the west, Foxbrough Place, Gray Fox Circle and Gray Fox Court to the south (Exhibit 4.8-1). The Bonde Pressure Zone normally serves connections between 390 and 540 feet in elevation. One of the storage tanks is located approximately 400 feet south of the terminus of Gray Eagle Court, adjacent to the Plan Area. Storage tanks are also located southeast of the Plan Area in the Ruby Hill development.

Water Demand

As stated above, Zone 7's sustainable annual water supply is estimated at 54,200 ac-ft annually with 43,200 ac-ft available for municipal users.

In 1996, Pleasanton's water demand was approximately 15,206 ac-ft. Historical and projected peak water day supply (which includes excess storage capacity) and demand are summarized in Table 4.8-4a (City of Pleasanton 1996b). As shown, there is adequate supply to meet peak day demand.

Table 4.8-4a Pleasanton's Peak Day Water Demand Projection Compared to Supply ¹						
Year	City Wells	Zone 7	Excess Storage	Total Peak Day Supply	Peak Day Demand	Excess Peak Day Supply
1995	9.0	25.4	10.9	45.3	26.2	19.1
1996	9.0	25.4	9.0	43.4	27.6	15.8
1997	9.0	25.4	9.3	43.7	28.9	14.8
1998	9.0	25.4	9.2	43.6	30.0	13.6
1999	9.0	25.4	8.6	43.0	30.9	12.1
¹ millions of gallons per day						
Source: 1996 Growth Management Report Update.						

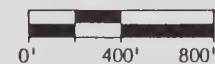


Source: Bissell & Karn, 1998.

Water Pressure Zones

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN
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EXHIBIT 4.8-1



EDAW

Based on population projections for Zone 7, demand could outpace supply by year 2003 (City of Pleasanton 1996b). To meet the overall anticipated demand of the full buildout of the General Plans in the cities and county within its service area, Zone 7 is actively seeking new sources of water supply including possible purchase of water rights from other jurisdictions. Conservation, use of reclaimed water and improvements to the existing conveyance system would also reduce water demand, thereby extending existing supplies.

Relevant General Plan Policies and Programs

The following General Plan Public Facilities Element Policies and Programs are relevant to a discussion of water:

- Program 4.1 Require new development to pay for its fair share of the City's water system master plan improvements.
- Program 4.4: Maintain water pressure at sufficient levels to serve residential, commercial, industrial, and fire flow requirements as determined by the City Engineer.
- Program 4.5 Require the installation of water conservation devices and drought tolerant landscaping in appropriate locations.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

A project is considered to have a significant impact on water services if it would result in:

- ▶ Water demand that exceeds available supply;
- ▶ Water demand that exceeds available distribution, storage capacity or pressure requirements; or
- ▶ An inconsistency with the goals and policies of the Pleasanton General Plan regarding the adequacy of the existing water system and the demands of new development on the system.

Project Impacts

Impact
4.8-4a

Adequacy of Water Supply. The proposed project would increase the demand for water in the City of Pleasanton. Adequate supply is available to meet this demand. Therefore, no impacts on the City's water supply would be anticipated.

Development of the project site would result in the increased demand for approximately 68.9 million gallons (212 ac-ft) of water per year. The new residential units would use approximately 42.6 million gallons, the elementary school would use 6.7 million gallons, and the 20-acre park would use 19.5 million gallons annually. Projected annual water use is detailed in Table 4.8-4b.

Table 4.8-4b Annual Water Use Standard				
Use	# Units	Gallons per Unit per Year	Total Gallons per Year	Average Acre-Feet Per Year
Proposed Homes	189	225,570	42,632,730 ¹	131
Existing Homes	19	225,570	4,285,830	13
Community Park	20 acres	3 ac-ft/acre/year ²	19,551,000	60
Elementary School	12 acres	N/A	6,767,100	21
TOTAL			73,236,660	225
¹ Assumes 225,570 gallons per unit per year based on 3.09 persons per single-family household.				
² Cusenza, pers. comm., 1998				
Source: EDAW 1998				

Peak-day water use including existing residential demands is estimated at 648,813 gallons. Table 4.8-4c identifies the peak-day demand for the onsite uses.

Table 4.8-4c Peak Day Water Use: Standard Estimate			
Use	Total Gallons per Year	Average Gallons Per Day	Gallons Per Peak Day ²
Proposed Homes	42,632,730	116,802	350,406
Existing Homes	4,285,830	11,742	35,226
Community Park	19,551,000	65,170 ¹	195,510
Elementary School	6,767,100	22,557 ¹	67,671
Total	73,236,660	216,271	648,813
¹ Assumes 300 days of watering per year			
² Peak Day = 3 times Average Gallons per Day			
Source: EDAW 1998			

Water conservation measures in single family homes (including use of drought-tolerant landscaping) are estimated to reduce water consumption by as much as 10% (City of Pleasanton; Mundie & Associates 1998). If the 189 new homes were to achieve this reduction, the projected new residential water demand would be approximately 38.4 million gallons per year (118 ac-ft), and 315,365 gallons on a peak day (0.97 ac-ft). With the park and elementary school, development the Plan Area would

demand a total of 64.7 million gallons 199 ac-ft and 578,546 gallons (1.8 ac-ft) on the peak day. These estimates were calculated from Tables 4.8-4b and 4.8-4d.

Table 4.8-4d Annual Water Use: Reduced Estimate					
Use	# Units	Gallons per Unit per Year	Total Gallons Per Year	Acre-Feet per Year	Percent Reduction from Standard Estimate
Proposed Homes	189	203,013 ¹	38,369,457	118	10%
Existing Homes	19	225,570	4,285,830	13	0%
Community Park	20 acres	3 ac-ft/acre/year ²	19,551,000	60	0%
Elementary School	12 acres	N/A	6,767,100	21	0%
TOTAL			68,973,387	212	6%
¹ Assumes 3.09 persons per single-family household with a 10% water conservation reduction.					
² Cusenza, pers. comm., 1998					
<i>Source: EDAW 1998</i>					

The City of Pleasanton has a contract with Zone 7 to provide treated water to residential, commercial and industrial users in the City. The contract obligates Zone 7 to provide for the present and future needs of its customers. Zone 7 currently has adequate water to supply projected water demand for Pleasanton, Livermore and Dublin through the year 2003. Implementation of water conservation measures throughout Zone 7's service area would reduce water consumption by 10% and result in current Zone 7 supplies exceeding the total demand generated by the buildout of the general plans for Pleasanton, Livermore and Dublin. Therefore, impacts to water supply would be less than significant.

Impact
4.8-4b

Adequacy of Water Distribution. Potable water is currently not provided by the City to the Specific Plan Area. However, the Specific Plan includes improvements to the water distribution system that would provide potable water to the proposed site uses. Therefore, project impacts on the water distribution system would be considered less than significant.

Currently, there is no City water service to the Plan Area. Additional distribution lines (and associated pumps and water storage facilities) would be required within the Plan Area to convey water for domestic and fire flow purposes. The recently completed 36-inch Zone 7 trunk line in Vineyard Avenue would be used as the primary treated water distribution line within the Plan Area. This trunk would be accessed through completion of improvements at the existing Pleasanton Turnout #6 located adjoining the Fire Station at the easterly border of the Plan Area. This turnout is currently serving as

part of a looped supply to Lower Zone properties within the Ruby Hill development and would be valved to concurrently supply a new Bonde Zone pressurization pump. The new pump station would be located adjacent to the turnout and Fire Station and would feed a new 16-inch Bonde Zone trunk line proposed within the existing Vineyard Avenue right-of-way. The new trunk line would extend westerly to connect with the existing Bonde Zone line in the vicinity of Lot 15 (Exhibit 4.8-2). This connection would serve to complete a loop of both systems. Secondary distribution lines would extend from the new main trunk line.

The provision of City water to the Plan Area would occur in phases. Lots 1 through 17, located at the westerly end of the Plan Area, could receive interim water service by connecting to the current Bonde Zone system. Distribution lines may be extended south and east from the existing Vineyard Avenue trunk line to serve a limited number of homes and the park on an interim basis, provided that comparable system enhancements are concurrently completed. Service to these lots and the park would be accomplished by building a secondary supply loop from the existing Vineyard Avenue trunk line south beyond the Plan Area properties to connect at the north end of Foxbrough Place.

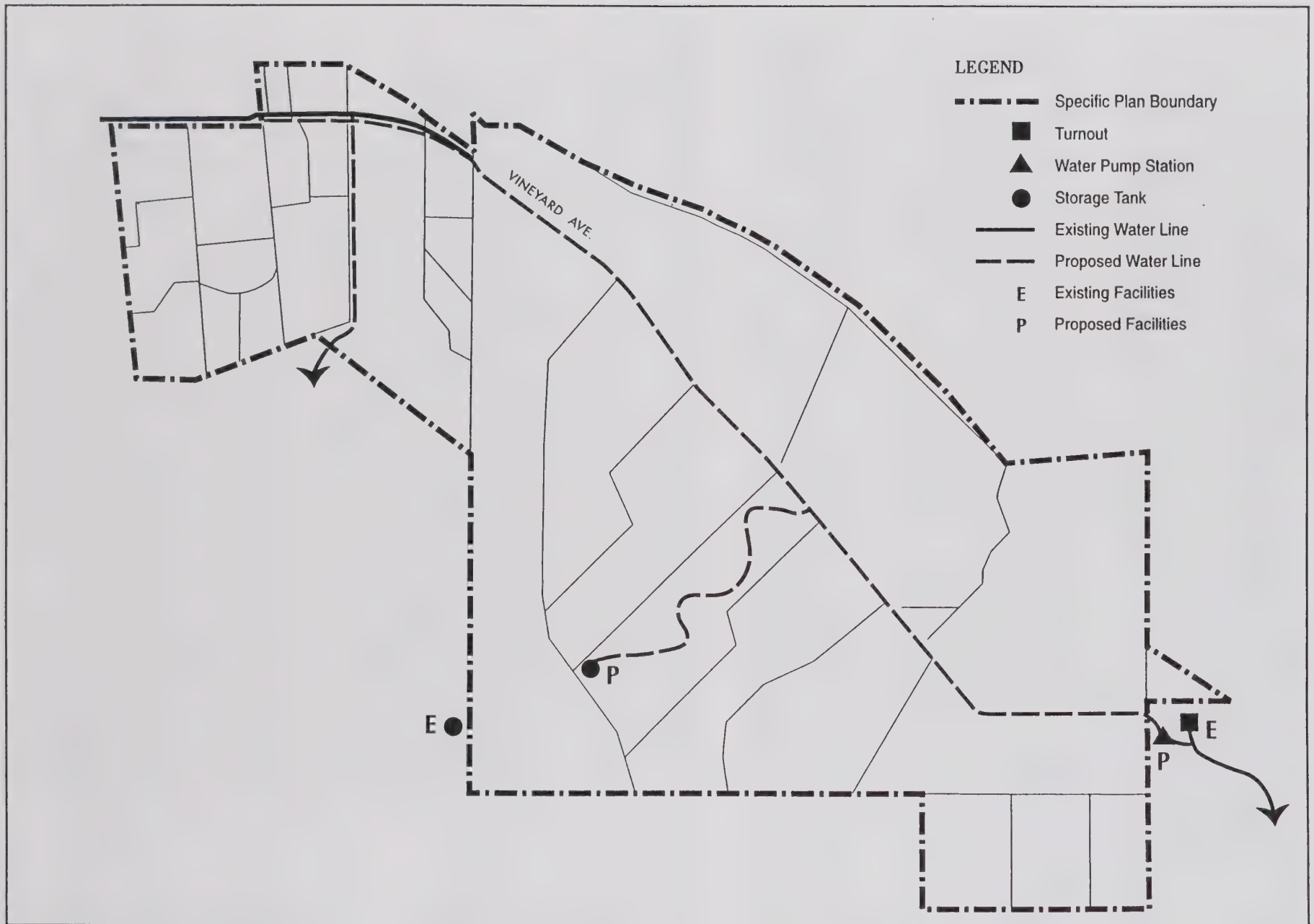
The proposed elementary school may be served on an interim basis by extending the Vineyard Avenue trunk line from the Phase 1 boundary to the easterly end of the Plan Area where it would be connected with Turnout #6. Phase 2 improvements would not include the pump station and storage tank, but would be limited to serving only the school site.

The final phase of improvements would include the pump station, storage tank and associated local distribution lines. These improvements would be capable of providing service to the remaining residences and other uses located at various elevations within the Plan Area. Impacts associated with development of the project site on the water distribution system would be considered less than significant.

Impact
4.8-4c

Adequacy of Water Storage. No City water storage facilities are currently located within the Plan Area. To provide adequate water pressure for domestic and fire flow capability, a new storage tank would be required. The proposed water system for the Plan Area includes a new tank on Lot 25. This tank would be of sufficient size to serve the Plan Area as well as enhance the reliability of the existing Bonde Zone system. Therefore, impacts to water storage/pressure would be considered less than significant.

Development of the Specific Plan would include necessary water storage improvements to ensure adequate water and water pressure for the Plan Area. Additional storage to meet domestic service and fire flow requirements would be provided by building a new Bonde Zone storage tank near elevation 636. The new tank would be sited within the saddle of a ridge line along the southern property line of Lot 25 (Exhibit 4.8-2). The tank would be approximately 750,000 gallons and capable of serving local Plan Area properties while enhancing the reliability of the existing Bonde Zone system. A pump and distribution line connecting the tank to the proposed 16-inch trunk in Vineyard Avenue would also be constructed to complete the pump-store-distribution cycle. Therefore, impacts associated with site development on the water storage/pressure system would be considered less than significant.



Source: Bissell & Karn, 1998.

Water System

EXHIBIT 4.8-2

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

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EDAW

Impact
4.8-4d

Adequacy of Water Pressure. The Plan Area ranges in elevation from 383 feet above sea level on Lot 18 (adjacent to the Arroyo del Valle) to 700 feet on Lot 22. It is possible to serve development within this range by integrating the Plan Area into the Bonde Zone. However, 5 existing and 7 proposed homes above the upper Bone Zone limit would be required to install onsite storage and pumping facilities to provide adequate pressure for domestic and fire flows. With the implementation of these facilities, the impacts associated with development of the proposed project on water pressure would be considered less than significant.

Water connections at different elevations in the Plan Area would require different strategies to meet the pressure criteria. The majority of the connections would fall within the normal elevation boundaries of the City's Bonde Zone (390 to 540 feet) as identified in Exhibit 4.8-1. Homes located within this range can be served by integrating into the Bonde Zone and constructing additional storage and pumping facilities. The Plan Area has been divided into four elevation bands (Exhibit 4.8-2). Each band has different service considerations.

A small portion of the Plan Area on Lot 18 adjoining the Arroyo del Valle is approximately 7 feet below the 390 foot elevation. Maximum localized pressure could approach 120 pounds per square inch (psi) in this area but would not exceed the 125 psi maximum allowable limit. One vineyard estate is planned for this lot. The actual home site would be located above the 390 foot elevation boundary. In addition, all connections where localized pressure exceeds 80 psi are required to install pressure reducing valves (PRVs) in accordance with City standards. Therefore, water pressure impacts below the 390 foot elevation would be less than significant.

Elevations exceeding 540 feet are outside the upper limit of the Bonde Zone. Portions of Lots 22 through 29 are located at above 540 feet. Approximately 5 existing and 7 proposed homes are within this elevation band. The Specific Plan requires new homes located above the Bonde Zone elevation and existing home hookups to install individual water storage tanks and hydro-pneumatic pumps in order to provide adequate water supply and pressure to meet both fire flow requirements and domestic needs. With the provision of these facilities, the water pressure impacts associated with development of lots above 540 feet would be considered less than significant.

Impact
4.8-4e

Availability of Water for Irrigation. The Specific Plan includes areas of vineyards and possible other agricultural uses that would require irrigation water. Well water or untreated surface water would be available to supply this water demand. No significant impacts would be anticipated.

The agricultural land uses included within the Specific Plan would require water for irrigation purposes. Well water on the individual lots would be available to meet this water demand. These water supply systems would be separate from the domestic water supplies provided by the City in the remainder of the Plan Area. The 19 existing homes located within the Plan Area are served with onsite wells. Following individual site subdivision and the extension of water infrastructure to the Plan Area, these homes would tie into City water and no longer rely on well water. Eliminating these homes from groundwater use would increase the available supply for irrigation purposes. No significant impacts

on available water supply would be anticipated with the implementation of agricultural operations on the project site.

Impact
4.8-4f

General Plan Consistency. The proposed Specific Plan includes a water system concept plan that would provide adequate water supply, distribution and pressure for all development throughout the Plan Area consistent with General Plan Public Facilities Element Policy 4 and Program 4.4. Funding for all improvements would be paid for by new development consistent with Program 4.1. Therefore, no inconsistencies with applicable General Plan Policies would occur.

A water system concept identifying pumping, storage and distribution facilities has been prepared for the proposed Specific Plan. These improvements would be made prior to construction of homes in the Plan Area in order to ensure that adequate storage, pressure and distribution is available to provide both domestic and fire flow. Construction of these improvements would be consistent with General Plan Public Facilities Element Policy 4 (Water) and Program 4.4. New development would pay for necessary improvements on a pro-rata share basis. Allocating the cost of improvements to new development would be consistent with Program 4.1. New development would also be required to install water efficient fixtures (e.g., low-flow toilets to conserve water). Drought tolerant plants would also be required in landscaped areas. These measures would be consistent with Program 4.5. Therefore, the proposed Specific Plan would be consistent with applicable General Plan water policies. No impacts would be anticipated.

SPECIFIC PLAN MEASURES

No Specific Plan measures would be necessary.

ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant impacts on the local water supply would be anticipated with development of the Specific Plan Area.

4.8.5 WASTEWATER SERVICE AND TREATMENT

EXISTING CONDITIONS

Wastewater collection, treatment and disposal for the City of Pleasanton is provided by several public agencies. Sewage collection is provided by the City and conveyed to the Dublin-San Ramon Services District (DSRSD). The DSRSD treats sewage from the City of Pleasanton at its wastewater treatment plant located south of Stoneridge Drive and east of Interstate 680. Treated effluent from the plant is conveyed through Livermore-Amador Valley Wastewater Management Authority (LAVWMA) facilities and discharged into the East Bay Dischargers Authority (EBDA) forced sewer main and eventually to the San Francisco Bay outfall (City of Pleasanton 1996b).

City of Pleasanton

The City of Pleasanton is responsible for monitoring and operating the City's sewer collection system. The City's collection facilities include gravity sewer lines, pump stations, and force mains. This infrastructure carries sewage to the DSRSD treatment plant. The City's portion of the sewer connection fee paid by new homes is used to fund major expansions of this system.

The City has established various types of "reservations" of sewage capacity. Some of these are legally binding, such as annexation agreements, presales of sewage connections, reservation agreements, and unused capacity purchased through building permits (i.e., projects that are under construction or that are built but flowing at less than purchased capacity). Other reserves are not legally committed or encumbered, such as capacity that is "set aside" for residential projects with Growth Management Plan (GMP) approval or exemption for approved Commercial/Office/Industrial (C/O/I) projects.

According to the *1996 Growth Management Report Update*, as of July 1, 1996, there were residential reserves of 544,260 gpd and C/O/I reserves of 893,834 gpd (City of Pleasanton 1996b). The residential reserve category is comprised mainly of GMP approvals that are not legally encumbered. This reserve would allow development of all approved, but unbuilt, projects. These projects are virtually all conditioned to preclude their development if capacity is not available at the time building permits are sought. The C/O/I reserve consists mainly of legal reserves. It would allow development of all approved, but unbuilt, projects. The C/O/I reserve includes sufficient capacity to allow build-out of all of the City's major business parks. The only significant C/O/I areas that will need first-come, first-serve capacity are Stanley Business Park, Staples Ranch, and San Francisco Water Department's Bernal Property.

Dublin-San Ramon Services District

The Dublin-San Ramon Services District is under contract with the City of Pleasanton to provide wastewater treatment. In addition to Pleasanton, the DSRSD plant provides secondary wastewater treatment to portions of San Ramon and Dublin, the Castlewood Country Club, and the Santa Rita Jail and Prison Facilities. Pleasanton is a partner with DSRSD in the DSRSD treatment plant. Current capacity of the plant is 11.5 million gallons per day (mgd). Approximately 10 mgd of wastewater are treated at the plant. The plant provides primary and secondary treatment and filtration of wastewater

to be recycled. Primary treatment is a physical process that removes large objects, as well as finer solids that settle out of the wastewater. Secondary treatment is a more complex, biological process that uses bacteria to convert dissolved organic matter into suspended matter that settles out.

Treated wastewater from the DSRSD is pumped to a storage facility that is owned and operated by the LAVWMA. Average Dry-Weather Flow (ADWF) is the average flow of sewage in the system during non-rainy months when the lowest amounts of rainwater infiltration occur. Pleasanton's share of DSRSD plant capacity is approximately 7.2 mgd ADWF. The amount of treatment capacity that the City currently uses is measured by the flow entering the DSRSD treatment plant from Pleasanton sewers, with several small exceptions where sewage is discharged into the DSRSD collection system (these exceptions have a minimal effect on available treatment capacity at this time). Current flows from Pleasanton to the plant are approximately 5.6 to 5.8 mgd (Cusenza, pers. comm., 1998). The estimated remaining "first come-first serve" capacity of the DSRSD Plant (ADWF) as reflected in the *1996 Growth Management Plan Update* was 477,000 gpd. This capacity is sufficient to serve approximately 2,100 single-family homes (City of Pleasanton 1996b).

DSRSD is currently preparing a treatment plant master plan that will address the need for additional treatment capacity in the future. The agreement also commits DSRSD to expand treatment capacity to serve Pleasanton on an as-needed basis (Mundie & Associates; City of Pleasanton 1997).

Livermore-Amador Valley Wastewater Management Authority (LAVWMA)

The LAVWMA is a joint powers agency created in 1974 by the cities of Livermore and Pleasanton and the DSRSD to convey wastewater to the EBDA system. Operations began in September 1979. The LAVWMA currently has a design capacity of 21-mgd of treated water (City of Pleasanton 1996a). Sewer flow entitlements for the three entities using the LAVWMA system are 7.50 mgd for the City of Pleasanton, 4.77 mgd for the DSRSD and 8.73 mgd for the City of Livermore. Wastewater is conveyed via a 26-mile pipeline from Livermore to San Lorenzo where it enters the EBDA system. Once in the EBDA system, the effluent is combined with treated effluent from four member agencies of the EBDA and dechlorinated prior to discharge through a common outfall pipe that discharges approximately 30,000 feet from shore in approximately 23 feet of water (City of Pleasanton 1996b).

Currently, the LAVWMA has available capacity to accommodate 7.5 mgd from the City of Pleasanton. Peak wet weather flows, or average day maximum month (ADMM) flows, are equal to approximately 1.4 to 1.6 times ADWF (Cusenza, pers. comm., 1998). Given the current estimated maximum flow for 1998 of 5.6 mgd, peak flows could reach 8.4 mgd (5.6 mgd x 1.5), which would result in an exceedance of Pleasanton's export capacity. Wet weather flows emanating from the LAVWMA member agencies have at times exceeded LAVWMA capacity. However, in the event that the combined DSRSD/Pleasanton wet weather discharges exceed permitted limits, DSRSD is responsible (by agreement) for paying any fines for any overflows that occur from Pleasanton or DSRSD. In addition, Livermore currently has unused disposal capacity in the LAVWMA system that it leases to DSRSD. Because DSRSD and Pleasanton discharge joint flows to the LAVWMA system, Livermore's leased capacity can be used to offset a portion of Pleasanton's or DSRSD's peak wet weather flows. DSRSD's leased capacity from Livermore can also be used to serve future development in the City of Pleasanton until further improvements to the system are made (Cusenza, pers. comm., 1998).

Pleasanton's maximum estimated ADWF capacity of the LAVWMA system as calculated in the *1996 Growth Management Report Update* was approximately 6.603 mgd, assuming 0.9 mgd of infiltration/inflow from groundwater and rainwater during the wettest period (City of Pleasanton 1996b). Accounting for the existing ADWF of 5.6 mgd, remaining capacity is approximately 1.003 mgd.

LAVWMA has been negotiating with the EBDA and the City of Hayward for expanded use of the EBDA outfall by 11.42 mgd bringing the average dry-weather flow design to 32.42 mgd and peak wet weather flow design to 41.2 mgd. To accomplish this, LAVWMA is proposing a new pipeline adjacent to the existing pipeline to increase the amount of sewage it can currently pump out of the valley (21 mgd). The LAVWMA Board approved this project on June 25, 1998. The City of Pleasanton voters approved the proposed EBDA outfall expansion and new pipeline in November 1998 (Cusenza, pers. comm., 1998). Based on this approval, the City of Pleasanton anticipates securing additional treatment and disposal capacity to accommodate all anticipated growth in the General Plan.

Although the daily and monthly flows that can be delivered to the EBDA system by LAVWMA are fixed, the total capacity of the LAVWMA facilities for handling ADWF and ADMM can be increased in several ways. Continued sewer line maintenance to minimize infiltration/inflow from rainfall is an on-going method, because lining older, leaky pipes minimizes infiltration. Adding storage (e.g., a detention pond) to enable peak month discharges to be spread over a period greater than one month is another possibility. Recycling a portion of the peak treated effluent flows during winter is another option, although potentially expensive. These methods rely on increasing the efficiency of the use of the existing LAVWMA capacity and are short-term solutions, allowing the existing treatment plant capacity to be more closely utilized but not allowing sufficient capacity for General Plan buildout (City of Pleasanton 1996b).

Treatment and Export Capacity Relationships

The following discussion was summarized from the *Draft Environmental Impact Report for the Happy Valley Specific Plan and Related Planning and Development Actions* (February 1998).

Pleasanton has made commitments to provide sewage capacity (transport, treatment and export) to various pending developments, not including the proposed Vineyard Avenue Corridor Specific Plan. These commitments total 1.44 mgd ADWF. Of this total, approximately 1.2 mgd have been legally committed by Pleasanton; the remaining 0.24 mgd are reserved for future developments, but no legally binding agreements between the owners and Pleasanton have been reached. The non-legally-binding reserves are "set aside" for residential projects that have GMP approval or exemption, and for approved C/O/I projects. They do not become legally binding until the specific projects have paid sewer connection fees (typically at the time a building permit is issued). These approvals have no legal priority over other projects, and the capacity may theoretically be assigned to projects on a first-come, first-served basis.

The City's commitments of sewage capacity are summarized and compared to DSRSD treatment capacity and LAVWMA export capacity in Table 4.8-5a. Committed capacity will not be "demanded" in the short-term. Commitments include residential development with no growth management approval to build until after 2000 and C/O/I development of unapproved projects totaling many years of absorption by the Pleasanton market. City staff estimate that all of the "committed" capacity will not be utilized (i.e. flowing) until 2005 or later.

Table 4.8-5 Wastewater Treatment Capacity Demand and Supply Relationships			
	Demand	Supply: DSRSD (Treatment Capacity)	Supply: LAVWMA (Export Capacity)
Total Capacity, ADWF		7.135 ¹	6.603 ³
Existing ADWF (1998) ¹ <i>Remaining Capacity After Existing ADWF</i>	5.800 ¹	-5.800 1.335	-5.800 0.803
Pending Development with Legal Commitments ² <i>Total Demand After Pending Legal Commitments</i> <i>Remaining Capacity After Pending Legal Commitments</i>	+1.200 ² 7.000	-1.200 0.135	-1.200 -0.397
Pending Developments without Legal Commitments <i>Total Demand After Pending Non-legal Commitments</i> <i>Remaining Capacity After Pending Non-legal Commitments</i>	+0.240 ² 7.240	-0.240 -0.105	-0.240 -0.637
¹ Estimated flow high range (5.6 - 5.8 mgd) (Cusenza, pers. comm., 1998). ² City of Pleasanton, 1996 Growth Management Plan ³ Total Average Day Maximum Month of 7.503 mgd, reduced by 0.9 mgd to account for infiltration/inflow is an estimate of average dry weather flow equivalent of the export system. City of Pleasanton, 1996 Growth Management Plan			
Source: EDAW 1998			

The figures in Table 4.8-5a make clear the following relationships:

- ▶ Dry weather flow capacity available at the LAVWMA equalization, storage, and export facility (6.603 mgd during the winter) is less than the capacity available at the DSRSD wastewater treatment plan (7.135 mgd).
- ▶ The estimated 1998 ADWF (5.8 mgd) plus the legally binding commitments from 1995 total 7.0 mgd and the 1998 ADWF plus all of the commitments is 7.240 mgd.

- ▶ Pleasanton has 135,000 gallons per day of remaining capacity at the DSRSD treatment plant after demand from existing flows and legal reserves, and a short-fall of 105,000 gallons per day of capacity after non-legal commitments are added to this demand.
- ▶ Pleasanton has a shortfall of 397,000 gallons of wastewater per day in the LAVWMA system after demand from existing flows and legal reserves. When demand from non-legal commitments is counted, the City's LAVWMA capacity is exceeded by 637,000 gallons per day.

LAVWMA is actively attempting to provide a larger export capacity to all of its subscribers. The Pleasanton City Council has expressed support of LAVWMA efforts to expand capacity and of negotiations with the EBDA for increased export capacity. In addition, the 1996 Pleasanton General Plan, Subregional Planning Element 2.7 calls on the City to cooperate with neighboring jurisdictions to evaluate alternatives for sewage treatment and export capacity expansion. It is unlikely that all the potential development accounted for in the various City legal and nonlegal reserves will seek building permits before more export capacity is obtained.

Plans for new, expanded export capacities in place have been delayed by complex negotiations between LAVWMA and EBDA as well as differences of opinion among the LAVWMA jurisdictions. There is no certainty that resolution of these differences or expansion capacity can be achieved. Regardless of the outcome of the LAVWMA process, however, the City of Pleasanton remains committed to securing sufficient treatment and disposal capacity to accommodate all growth anticipated in the General Plan.

Onsite Facilities

The Plan Area currently has no onsite public sewage collection facilities. Existing homes maintain their own septic disposal systems.

Relevant General Plan Policies and Programs

The following Policies and Programs from the General Plan Public Facilities Element are applicable to a discussion of waste water infrastructure.

Policy 1: Phase construction of permanent City sewer, water, and storm drainage improvements as a condition of new development to maintain City service standards.

Program 1.1: Coordinate developer financing with the City's Capital Improvement Program to ensure adequate capacity for future growth.

Policy 2: Secure sewage capacity through all available means for residential, commercial, and industrial development.

Program 2.1: Require new development to pay its fair share of the City's planned sewer system improvements including treatment, distribution, reuse, and export facilities.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

A project is considered to have a significant impact on wastewater service and treatment if it would result in one or more of the following:

- ▶ Wastewater generation in excess of levels that can be conveyed by the existing or planned distribution system;
- ▶ Wastewater generation in excess of current treatment or export capacity; or
- ▶ An inconsistency with the City of Pleasanton General Plan policies regarding the provision of wastewater services.

Project Impacts

Impact
4.8-5a

Adequacy of the Wastewater Collection System. Development of the proposed Specific Plan would increase flows to the City's sewage collection system. Improvements to an existing 8-inch sewerline, new pumping facilities, and the addition of a new 15-inch gravity line on the site are planned to provide wastewater collection for the Plan Area. A three-part construction program is proposed as part of the Specific Plan to install the necessary improvements. Therefore, the proposed project's effects on the local wastewater collection system would be considered less than significant.

The City's sewage collection system is generally adequate to accommodate existing sewage flows (City of Pleasanton 1996b). Major improvements, including the completion of the Cross Town Sewer, have recently been made to address deficiencies identified in the *1986 Sewer Master Plan*. Deficiencies in the Vineyard Avenue area have been addressed and some measures to relieve capacity constraints in the main trunk lines are included in the 1996-98 Capital Improvement Program (City of Pleasanton 1996b).

An existing 8-inch line, located approximately 600 feet west of the Plan Area just east of Tioga Court, conveys wastewater to the Cross Town Interceptor. The Interceptor is located just north of First Street and Vineyard Avenue. The *Vineyard Sewer Master Plan Study* (Corollo Engineers 1993) identified capacity deficiencies in this existing line in meeting wet weather flows and recommended construction of a new, larger capacity trunk line to accommodate wet weather flows plus future growth throughout the entire Master Plan Area.

Engineering work for the first portion of a three-part construction program was approved as part of the City's 1993/94 Capital Improvement Program (CIP). Construction of Section 1 improvements

(including an 18-inch parallel line between First Street and Bernal Avenue) was funded in the 1995/96 CIP. Right-of-way for this section is currently being acquired and construction is scheduled to follow shortly.

Replacement of the remaining section of the original 8-inch line east of Bernal Avenue (Section 2) was identified as part of the 1998/99 CIP. Independent review of the sizing for this replacement was completed for the City by G.S. Dodson & Associates in February of 1998. The Dodson study confirmed the need for a planned 15-inch diameter line, based on reduced wastewater flow requirements consistent with development yields reflected in the Vineyard Avenue Corridor Specific Plan. This improvement is anticipated to be completed within 1 to 2 years.

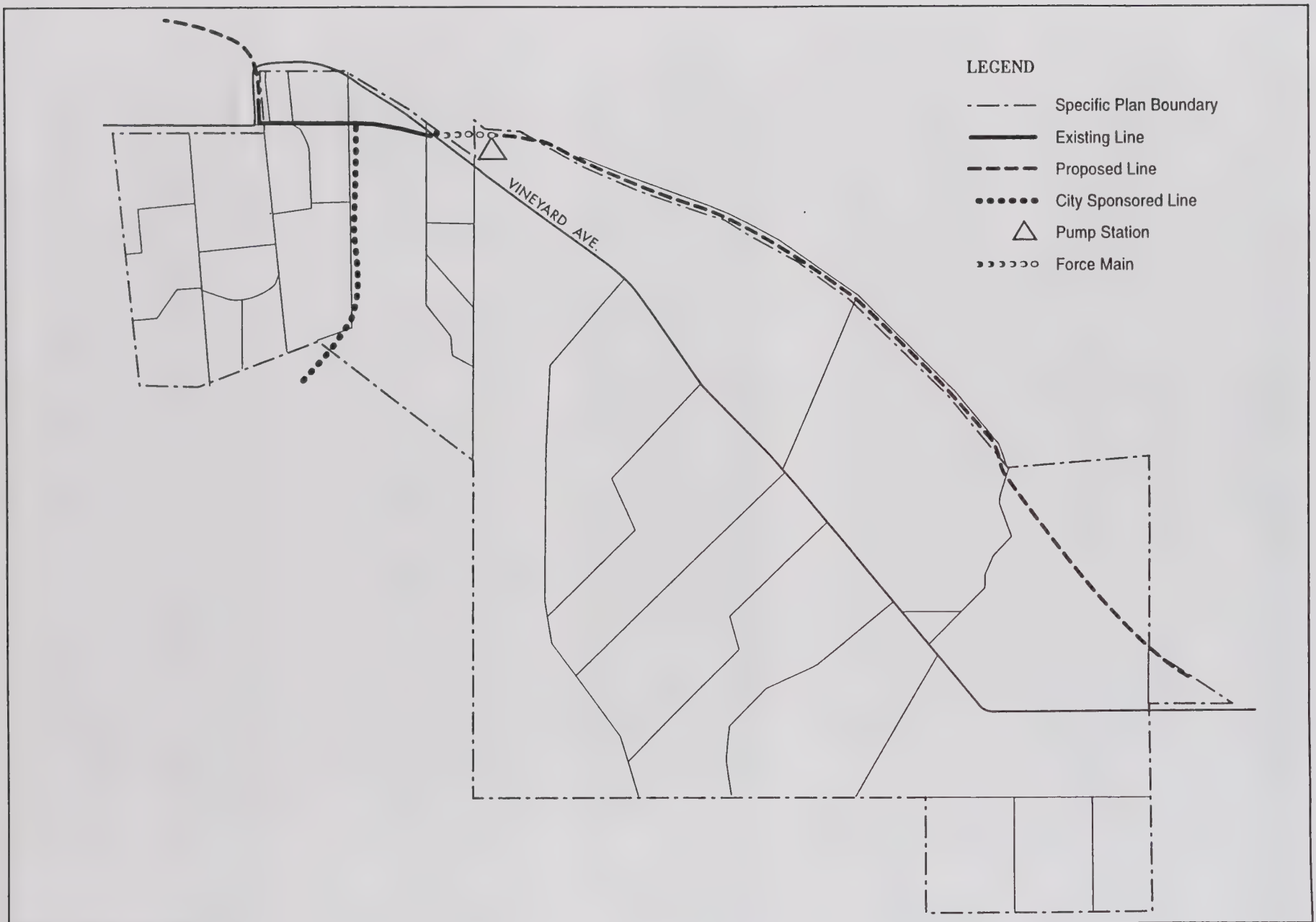
A planned Section 3 trunk line and sewage pumping facilities will ultimately be extended easterly through the Plan Area to serve future development (Exhibit 4.8-3). The new 15-inch line will have sufficient capacity to accommodate all contemplated uses within the Plan Area, and will follow the proposed realignment of Vineyard Avenue. The implementation of these anticipated improvements would ensure that adequate sewage transport capacity would be available for development within the Plan Area. Sewage impacts associated with development of the Plan Area would be considered less than significant.

Impact
4.8-5b

Adequacy of Treatment Capacity. The proposed Specific Plan would generate approximately 0.046 mgd of wastewater. If the 100-room inn, spa, restaurant, and conference facility development occurs, approximately 0.051 mgd of wastewater would be generated. The remaining City capacity at the DSRSD treatment plant is approximately 1.335 mgd. The City, therefore, has adequate capacity to accommodate the proposed project. The proposed project's effects on available treatment capacity would be considered less than significant.

Development of the Specific Plan would generate 41,580 gpd of wastewater from the 189 residential units, 400 gpd from the 20-acre community park and 4,000 gpd from the elementary school (Cusenza, pers. comm., 1998). This equates to 0.046 mgd ADWF of wastewater. If the 100-room inn, spa, restaurant, and conference facility development occurred on the site, wastewater generation would increase to 0.051 mgd (Cusenza, pers. comm., 1998). Pleasanton currently has approximately 1.335 mgd of treatment capacity available at the DSRSD plant (Table 4.8.5). After accounting for all pending legal commitments, Pleasanton would have a remaining capacity of 0.135 mgd, which would be adequate to accommodate the proposed project both with and without the inn development.

After accounting for additional non-legal commitments, Pleasanton could have a short-fall in capacity of 0.105 mgd. However, because these commitments are non-binding, Pleasanton is not legally obligated to provide this capacity. Also, DSRSD is developing plans to expand the capacity of the WWTP to meet Pleasanton's needs (per the agreement dated November 1993). For these reasons, the proposed project's impacts on wastewater treatment capacity would be considered less than significant.



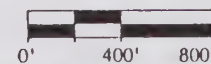
Source: Bissell & Karn, 1998.

Sewer System

EXHIBIT 4.8-3

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 9/98



EDAW

Impact
4.8-5c

Adequacy of Export Capabilities. The proposed Specific Plan would generate new wastewater flow demands on the existing LAVWMA wastewater conveyance facilities. The capacity of the LAVWMA conveyance facilities is at or near capacity now and is anticipated to be exceeded in the near future. However, the City of Pleasanton has indicated that it could serve the proposed project using capacity leased to DSRSD from the City of Livermore and guaranteed per agreement with DSRSD. Because the LAVWMA system has the flexibility to accommodate the increased flows from the proposed project, this impact would be considered less than significant.

The proposed project would increase the wastewater flow demands on the existing LAVWMA wastewater conveyance facilities. The facilities currently have a remaining capacity of 0.803 mgd. The projected wastewater generated by development of the proposed project (0.046 mgd with residential development and 0.051 mgd with residential and inn development) would not exceed this capacity. However, when combined with developments that have legal commitments from LAVWMA (Table 4.8.5), the capacity would be exceeded by 0.448 mgd, assuming the more intensive inn development occurred on the project site. When combined with developments that do not have legal commitments (Table 4.8.5), the capacity would be exceeded by 0.688 mgd.

The City of Pleasanton has indicated that DSRSD is currently able to accommodate LAVWMA flows from existing and future developments using excess capacity in LAVWMA that is leased back to DSRSD from the City of Livermore (Cusenza, pers. comm., 1998). Through this lease back program, adequate capacity could be provided for the proposed project in the short term. In addition, LAVWMA is planning to expand the capacity of its export disposal system to meet Pleasanton's long-term needs. Fees charged by the City for new development would be used to finance these improvements. Therefore, the impacts associated with the increased wastewater conveyance requirements of the proposed project would be considered less than significant.

Impact
4.8-5d

Provision of Sewer Service to Existing Residences. The 18 existing residences within the Plan Area, which are planned to be retained or replaced, would continue at least temporarily to be served by onsite septic systems. When these homes connect to the City's wastewater system in the future, they would generate approximately 220 gallons per day per home. This equates to a total increase of 3,960 gallons per day. This increase would be considered minimal and would not generate significant wastewater service impacts.

Private septic systems at existing residences may continue to be used until they fail, the owner chooses to connect to the City system, or the lot is subdivided. Assuming 220 gallons per day for older units, wastewater flows from the existing homes would add approximately 3,960 gallons per day to the City's wastewater system for conveyance, treatment and export (City of Pleasanton; Mundie and Associates 1998). This increase is considered minimal. In addition, because these homes would likely connect to City infrastructure in the future, plant expansions and additional capacity would most likely be available at the DSRSD and LAVWMA to serve the increased wastewater flows. The existing homes would also be charged a fair share portion of the cost for new trunk line facilities at the time of

connection. Therefore, the increased demand on wastewater conveyance, treatment and export facilities associated with existing homes in the Plan Area would be considered less than significant.

Impact
4.8-5e

Consistency with the General Plan. The proposed Specific Plan includes a sewer concept plan and identifies funding considerations to finance the required improvements. Wastewater infrastructure, treatment and capacity would be secured or constructed prior to development of properties within the Plan Area consistent with applicable General Plan Public Facilities Element Policies 1 and 2. Therefore, no General Plan consistency impact would be anticipated.

The wastewater infrastructure necessary to serve the Plan Area is proposed to be installed as part of a three-phase construction program. Initial improvements would occur in the western portion of the Plan Area (Lots 1-17) and move eastward until the entire Plan Area is connected to City infrastructure. This is consistent with General Plan Public Facilities Element Policy 1 (Sewer). Therefore, no significant impacts associated with General Plan consistency would be anticipated.

SPECIFIC PLAN MEASURES

No Specific Plan measures would be necessary.

ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant wastewater service impacts would be anticipated with development of the Specific Plan Area.

4.8.6 SCHOOLS

EXISTING CONDITIONS

The Pleasanton Unified School District (PUSD) provides educational services for grades kindergarten through twelve. The PUSD boundaries include the City of Pleasanton and some sparsely populated outlying areas. The PUSD currently contains 13 schools, including eight elementary schools (Alisal, Fairlands, Mohr, Vintage Hills, Donlon, Lydikesen, Valley View and Walnut Grove), two middle schools (Harvest Park and Pleasanton) and three high schools (Amador Valley, Foothill and Village). Enrollment, especially at the elementary school level, increased during the past 2 years. The PUSD currently serves approximately 11,000 students (City of Pleasanton 1998).

Table 4.8-6a identifies the 1997-1998 school year enrollment for the PUSD and the percentage of optimal capacity for each of the schools (Mohr Elementary, a new school which opened in the fall of 1997, was not included in these calculations). Optimal capacity is the enrollment level that can be accommodated at each school facility while still maintaining elements considered integral to the educational system, such as space for library services, special education, computer programs, intensive reading programs, cafeteria services, child care, and offices. The PUSD's policy is to add portables when enrollment exceeds the optimal capacity. During the 1997-1998 school year, the total district was at 106% of capacity, with the elementary schools at 108%, the middle schools at 134%, and the high schools at 85%.

The PUSD Board of Trustees has developed enrollment projections and conducted an analysis of the effects of future residential growth in Pleasanton on the School District's facilities. When all Pleasanton residential construction is completed, it is estimated that the new homes (i.e., those built after 1991) would generate approximately 2,200 additional elementary students, 1,100 additional middle school students, and 1,600 additional high school students (School Impact Fee Liaison Committee 1998).

Students generated by new residential development were estimated to require three additional elementary schools, one additional middle school and expansion of the Amador Valley and Foothill high schools. The first of the new elementary schools (Mohr Elementary) was completed and opened in September 1997. The opening of this school has assisted in achieving the optimal capacity of the existing elementary schools. The second elementary school is still in the planning stages but is expected to open in the fall of 2000. The third elementary school is anticipated to be built between 2002 and 2003. This facility is proposed for siting within the Specific Plan Area on portions of Lots 18 and 19. The new middle school is expected to begin construction in 1998, and open in the fall of 2000. High school expansions are needed soon, but would likely not begin until after the year 2000.

New facilities are financed through a combination of state funding and development fees. Development fees are paid by developers and are used to finance facilities needed because of new enrollments from housing built after 1991.

**Table 4.8-6
Pleasanton Unified School District**

School Name	■	Grade Level													Total Enrollment	Optimal Capacity	Enrollment as % of Optimum Capacity
		K	1	2	3	4	5	6	7	8	9	10	11	12			
ELEMENTARY																	
Alisal	38	89	92	83	93	87	86								568	654	89%
Donlon	35	125	120	154	155	152	160								901	834	108
Fairlands	0	92	114	113	119	108	99								645	678	95
Lydiksen	42	113	120	127	121	132	122								777	573	136
Valley View	0	109	104	109	113	119	125								679	660	103
Vintage Hills	9	99	119	141	119	123	99								709	576	123
Walnut Grove	0	109	145	152	162	162	131								861	774	111
Subtotal	124	736	814	879	882	883	822								5,140	4,749	108
MIDDLE SCHOOLS																	
Harvest Park	19							421	372	407					1,219	920	133
Pleasanton	33							504	483	528					1,548	1,142	135
Subtotal	52							925	855	935					2,767	2,062	134
HIGH SCHOOLS																	
Amador High	20										467	469	459	426	1,464	1,800	81%
Foothill High	10										405	349	362	295	1,150	1,400	82%
Village/Alternative	13										2	16	47	78	120	n/a	n/a
Subtotal	43										874	834	868	799	2,734	3,200	85%
Total (97-98)		736	814	879	882	883	822	925	855	935	874	834	868	799	10,641	10,011	106%
Total (96-97)		817	893	918	910	834	861	805	890	794	779	836	773	734	11,162	10,011	115%

■ = Students not assigned to specific grade level.

Note: Figures shown are enrollment figures taken from the CBEDS reports for the 1997-98 school year (October 1997; Pleasanton Unified School District). High school figures include students from the Sunol area attending Foothill High. Village High School and alternative education students are not included in calculations of enrollment as a percentage of capacity. Optimal capacity figures represent the maximum capacity for each school as deemed appropriate by the School District to accommodate desired programs, maintain desirable class sizes, and meet other applicable education goals (PUSD, "Developer Fee Justification," 12/15/92).

Source: Pleasanton Unified School District: CBEDS, October 1997; California Department of Education, CBEDS Profile, October 1996.

Relevant General Plan Policies and Programs

The following General Plan Public Facilities Element Policies and Programs apply to the provision of school services:

- Policy 10.1: Work with the School District to locate school sites to preserve the quality of life of existing and new neighborhoods.
- Policy 10.2: Encourage limited elementary school enrollment size (up to 650 students) to maintain neighborhood character and promote more personalized education.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

The proposed project would have a significant effect on schools if it would result in:

- The generation of students greater than could be accommodated by the existing or proposed PUSD school facilities.

Project Impacts

Impact
4.8-6a

Increased Demand for School Services. The proposed Specific Plan would allow construction of 189 new homes in the Plan Area. These additional homes would generate an estimated 138 students. The PUSD has plans to add new school facilities based on forecasts of student enrollment. New construction would be required to pay developer fees that contribute to financing school facilities. These fees, in conjunction with federal and state allocations, would be sufficient to offset any impacts to schools. No significant school facility impacts would be anticipated.

Construction of 189 single-family homes would generate an estimated 138 new students assuming a student yield of 0.73 for each home (School Impact Fee Liaison Committee 1998). These students would be dispersed among the elementary, middle and high schools in the local area depending upon the age of the students. This would increase the demand on existing school facilities and may contribute to exceeding optimal capacities.

An elementary school is proposed on 12 acres (portions of Lots 18 and 19) within the Plan Area. Provision of a site within the Plan Area is consistent with Public Facilities Element Program 10.1 (Schools). Construction of the school is anticipated in the PUSD Facility Plans and would be the third of three new elementary schools planned by the PUSD. The school is expected to be built between 2002 and 2003 (School Impact Fee Liaison Committee 1998). Any elementary school students living in the Plan Area prior to the facility's construction would attend other elementary schools in the PUSD. Middle and high school students generated from development in the Plan Area would attend either the existing facilities or the new facilities to be constructed.

Financing for the proposed elementary school would be provided in part from developer fees levied on construction of new homes in the Plan Area. New development also pays a fair share of maintaining existing facilities and infrastructure because residents of new housing contribute to satisfy the District's General Obligation Bonds.

Although development of the Plan Area would increase the number of students attending schools in the PUSD, potentially exceeding their optimal capacity, the construction of new schools (including the new school proposed on the project site) would ensure adequate facilities are available for the growing student enrollment. Also, the school fees that would be required with each new home constructed would assist in paying for the construction and maintenance of both new and existing school facilities. For these reasons, the impacts on school facilities associated with the proposed project would be considered less than significant.

SPECIFIC PLAN MEASURES

No Specific Plan measures would be necessary for school facilities.

ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant school facility impacts would be anticipated with development of the Specific Plan Area.

4.9 PUBLIC HEALTH AND SAFETY

This section contains a discussion of the public health and safety issues within the Plan Area. An analysis of potential public health and safety impacts associated with the proposed project is provided, as well as measures included in the Specific Plan to reduce significant impacts.

4.9.1 EXISTING CONDITIONS

AGRICULTURAL USES

Agriculture use in the Livermore Valley began with Spanish cattle ranching in the 1850s. The area supported wheat, barley, and hay production. Beginning in the 1880s, irrigated agriculture became established, allowing production of row crops, orchards, and vineyards. Agriculture continues to be the dominant industry in undeveloped portions of the valley.

The Specific Plan area includes several areas of current and former agricultural production. The more productive agricultural areas are generally located on the relatively flat alluvial terrace in the northern portion of the site. Within the Specific Plan area, most agricultural land currently supports cattle grazing. In addition, walnut orchards are present on Lots 19, 21, and 31. Some of these orchards are currently abandoned. The climate, soils, and topography of portions of the project site can also support productive wine grape vineyards. Currently one small vineyard is in production on Lot 26.

The agricultural uses at the project site commonly require the use of agricultural chemicals, including pesticides and herbicides. Production of pasture crops generally require minimal use of agricultural chemicals, usually restricted to minor herbicide application for weed control. Chemical use in orchards can be more intensive. Common pesticides used in walnut orchards include methyl bromide (oak root rot, nematodes), supracide (walnut scale), copper (walnut blight), and propargite (mites). The control of pests and disease in vineyards can include use of methyl bromide (oak root rot, nematodes), sulfur (mildew), carbofuran or sodium tetrathiocarbonate (phylloxera), and a wide range of herbicides (weeds).

Past agricultural use within the Specific Plan area could have also resulted in the use of DDT and toxaphene. These potent pesticides have been banned from use in the United States due to their high toxicity and persistence in the environment.

LANDFILL

The Specific Plan area includes a former landfill located on the 20-acre property in the northwestern portion of the project site owned by Pleasanton Garbage Service (Lot 14). The Old East Pleasanton Landfill was a privately-owned and operated landfill from 1950 to 1976. During its operational life, the landfill accepted solid non-hazardous waste, including garbage, rubbish, demolition and construction debris, brush, stumps, large appliances, and street waste. The landfill also accepted municipal wastewater treatment sludge and septage. In addition, cheese processing wastes, water softener brine, and neutralized solutions of chemicals were disposed. Construction of the landfill

resulted in filling of a small valley. The thickness of landfill averaged 25 to 30 feet, with a maximum thickness of approximately 80 feet in the central portion of the site.

Upon closure, the landfill surface was covered with a clayey soil cap approximately 2 feet thick. A Solid Waste Water Quality Assessment Test (SWAT) analysis of the landfill was performed in 1990. This assessment included analysis of soil, groundwater, and air quality at and adjacent to the landfill. The landfill and associated environmental evaluations are regulated by the San Francisco Bay Regional Water Quality Control Board (RWQCB) under the requirements of the California Water Code (Section 13273).

HAZARDOUS MATERIALS IN STRUCTURES

Some of the existing structures within the Specific Plan area were constructed prior to regulations prohibiting the use of asbestos-containing materials (ACM) and lead-based paint. Potential ACM, such as linoleum floor tiles, roofing material, and plaster board may be present. Structures on the site may also contain materials with small amounts of hazardous materials, such as fluorescent light fixtures and light ballasts containing small quantities of polychlorinated biphenyls (PCBs) and mercury. In addition, older power transformers along the existing electrical transmission lines within the Specific Plan area may contain PCBs.

REGULATORY FRAMEWORK

Hazardous Materials Management

The use, storage, and disposal of hazardous materials, including management of contaminated soils and groundwater, are regulated by numerous local, state, and federal laws and regulations. A description of agency jurisdiction and involvement in management of hazardous materials is provided below.

U.S. Environmental Protection Agency. The U.S. EPA is the federal agency responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. The legislation includes the Resource Conservation and Recovery Act of 1986 (RCRA), the Superfund Amendments and Reauthorization Acts of 1986 (SARA), and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). The U.S. EPA provides oversight and supervision for site investigations and remediation projects, and has developed land disposal restrictions and treatment standards for the disposal of certain hazardous wastes.

Department of Toxic Substances Control. The California Department of Toxic Substances Control works in conjunction with the U.S. EPA to enforce and implement specific laws and regulations pertaining to hazardous wastes. The California legislation, for which DTSC has primary enforcement authority, includes the Hazardous Waste Control Act and the Hazardous Substance Account Act. The California Department of Toxic Substances Control generally acts as the lead agency for soil and

groundwater cleanup projects, and establishes cleanup and action levels for subsurface contamination that are equal to, or more restrictive than, federal levels.

San Francisco Bay Regional Water Quality Control Board. The City of Pleasanton is located within the jurisdiction of the San Francisco Bay RWQCB. The RWQCB is authorized by the California Porter-Cologne Water Quality Act of 1969 to implement water quality protection laws. The RWQCB provides oversight for sites where the quality of groundwater or surface waters are threatened, and has the authority to require investigations and remedial actions.

California Air Resources Board and the Bay Area Air Quality Management District. CARB and BAAQMD have joint responsibility for developing and enforcing regulations needed to achieve and maintain state and federal ambient air quality standards in the Bay Area basin, which includes the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, Santa Clara, and San Mateo, and portions of Solano and Sonoma counties. CARB is responsible for enforcing the Clean Air Act and California's State Ambient Air Quality Standards. BAAQMD is responsible for regulating air emissions from stationary sources, monitoring air quality, and reviewing air quality issues in environmental documents.

Local Hazardous Materials Management. The primary agencies responsible for local enforcement of state and federal laws include the Livermore-Pleasanton Fire Department (LPFD), the Alameda County Health Agency (ACHA), and the Alameda County Agricultural Commissioner Office (ACACO). The LPFD is responsible for coordination of the hazardous waste generator program, above ground and underground fuel tank management, and tiered permitting process for waste treatment. The LPFD conducts regular inspections of all buildings identified as occupancies, including those where hazardous materials are stored. The ACACO issues pesticide use permits and collects information on agricultural (e.g., farmland) sites handling hazardous materials.

Worker Health and Safety

Worker health and safety is regulated at the federal level by the Federal Department of Industrial Relations. Under this jurisdiction, workers at hazardous waste sites must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations (29 CFR Part 1210.120). Additional regulations have been developed for construction workers potentially exposed to lead (29 CFR Part 1926.62) and asbestos (29 CFR Part 1926.1101). The U.S. EPA also administers federal regulations for the protection of agricultural workers involved in pesticide use (40 CFR).

Worker health and safety in California is regulated by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA). California standards for workers dealing with hazardous materials are contained in Title 8, CCR, and include practices for all industries (General Industry Safety Orders), and specific practices for construction, and hazardous waste operations and emergency response. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices. State regulations pertaining to agricultural workers potentially exposed to pesticides (Title 3, CCR) are administered by the California Department of Pesticide Regulations (Cal/DPR), and generally enforced by ACACO. These

agencies also administer programs for the licensing of pesticide applicators and permitting of application of restricted use agricultural chemicals.

Relevant General Plan Policies and Programs

The following public safety policy and program included within the General Plan Public Safety Element are applicable to the proposed project.

Policy 17: Ensure that hazardous materials and potential contamination are remediated prior to development.

Program 17.1: Require a site specific soils report for new development where there is a history of prior industrial or agricultural land use activities.

4.9.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

An impact to public health and safety for the Specific Plan area could be significant if it:

- ▶ Involves a risk of explosion, fire, or release of hazardous substances, including but not limited to oil, pesticides, chemicals, or radiation;
- ▶ Creates a health or potential health hazard; or
- ▶ Exposes people to existing sources of potential health hazards.

SPECIFIC PLAN GUIDELINES

The Specific Plan includes measures that are intended to reduce potential impacts associated with public health and safety to less-than-significant levels.

PROJECT IMPACTS

Impact
4.9-1

Agricultural Chemical Use. The storage and use of agricultural chemicals in proposed vineyard and other possible agricultural operations could result in the exposure of workers or the public to increased health risks. This potential exposure is considered a potentially significant project impact.

The project proposes the development and operation of vineyards in the northern and eastern portion of the Specific Plan Area. Operation of vineyards typically includes use of agricultural chemicals to promote vine growth and pesticides to eradicate pests. Pesticides are the general class of chemical compounds used to control animal and plant pests and include herbicides, fungicides, insecticides, and rodenticides.

The use of chemicals in the agricultural operations of vineyards could expose vineyard workers or the public (if they come into contact with these chemicals) to increased health risks. Of particular concern would be the residents located adjacent to the vineyard operations and the school children that would attend the proposed elementary school. Because of the potential human exposure to these chemicals associated with vineyard operations adjacent to residential and school land uses, this impact would be considered potentially significant.

Vineyard management usually does not require application of large quantities of nutrients, as grapevines have relatively low nitrogen demands. Herbicide use is common, particularly for the control of weeds. Although other methods of control, including mechanical cultivation, plowing, mulching, or planting of select ground cover, can be effective, chemical use can be favored by some growers for weed control. The herbicides are generally applied by spraying an emulsion containing the active chemicals. In relatively small vineyards such as those proposed, the pesticides are applied by a person carrying a spray tank or from a portable tank pulled by a tractor; aerial spraying of small vineyards is not common nor is it permitted by the Specific Plan.

The most common pesticide used in vineyards is sulfur, typically used as a fungicide for control of powdery mildew. The sulfur is applied as a wettable powder. Sulfur is generally considered to be of low toxicity and poses very little risk to human and environmental health. However, repeated or prolonged exposure to dust may cause irritation to mucous membranes.

In addition to herbicides and fungicides, other pesticides are used for the control of insects. Prior to planting, many vineyards are treated with methyl bromide to eradicate parasitic nematodes that live in soil. These unsegmented roundworms feed on vine roots, reducing vigor and yield of the affected vines. Methyl Bromide is also effective in killing oak root fungus, a pest common for vineyards planted in areas cleared of oak trees. This chemical is also used as a fumigant for control of termites in structures and as a rodenticide. Methyl bromide is a potent neurotoxin and is classified as an ozone-depleting chemical by U.S. EPA. This chemical is a gas at ambient temperatures and pressures and, therefore, inhalation is the primary exposure pathway for humans.

In 1992, the California Department of Pesticide Regulation (DPR) designated methyl bromide as a restricted material requiring special notification procedures and specific review of all proposed agricultural applications by the County Agricultural Commissioner under the Restricted Use Permits process. Additionally, a ban on the use of methyl bromide in California by the year 2001 has been proposed.

All pesticides must be registered for use by the U.S. Environmental Protection Agency and the California Department of Pesticide Regulation under Food and Agricultural Code §12500 *et seq.* and Title 3 of the California Code of regulations (CCR) §6000 *et seq.* County agricultural commissioners are also directly involved in regulation of pesticide application in the respective counties.

Once pesticides are registered for use, they are labeled with restrictions regarding their use on certain pests and frequency of application. It is a violation of state and federal law to use any pesticide in a manner inconsistent with the product's label. Some pesticides are restricted for use, except by licensed pesticide control applicators who have received special training in the safe use of these materials.

Restricted-use pesticides may only be applied under a permit from the County Agricultural Commissioner's office. The Agricultural Commissioner must also be notified regarding the use of all pesticides and provided with information regarding employee training, pesticide use records, storage areas, and equipment used for applying the pesticides. Further restriction for the proper storage of hazardous materials, including materials stored in under- and above-ground storage tanks are required by local, state, and federal statutes and regulations. Although these standards and regulations reduce the potential for exposure of people to toxic levels of pesticides, migration of these chemicals as they drift away from application areas or residual contamination within soils at the vineyards could present significant increased health risks.

In addition, agricultural crops other than vineyards could be planted within the Plan Area. The types of crops that could be planted are currently unknown but would generally be limited to orchard or row crops. Similar to vineyard operations, the planting of orchard or row crops would include some form of pesticide application. Chemical labels would suggest either greater or lesser health concerns associated with pesticide use when compared to vineyard operations. However, the potential health effects associated with general pesticide use for orchard or row crops would not be expected to differ substantially from those associated with vineyard operations. Similar to vineyard operations, the health effects of pesticide use for orchard or row crops would be considered potentially significant.

Impact
4.9-2

Landfill Hazards. Use of the old landfill as a park on Lot 14 could result in exposure of the public to contaminants that may result in increased health risks. This would be considered a potentially significant impact.

Analysis of air, soil, and groundwater quality has been performed at the landfill site in an evaluation of potential environmental degradation resulting from disposal of waste. The results of the analysis indicated the presence of environmental contaminants in air (methane and methylene chloride), in soil (toluene, metals), and in groundwater (metals, benzene, trans-1,2 dichloroethylene, tetrachloroethylene, chloroform, nitrates, chloride). These contaminants may be discharged from the landfill. The presence of these contaminants in the environment may present a significant additional health risk for members of the public using the site. Potential exposure pathways could include inhalation of gases or fumes, ingestion (typically by children) of exposed contaminated soil, or dermal contact with affected soil or groundwater. This would be considered a potentially significant impact.

Impact
4.9-3

Release of Landfill Gas. The generation of methane gas within the old landfill site on Lot 14 presents the potential for exposure of the public using the proposed park and adjacent residents to the risk of fire, explosion or the release of methane gas in the event of the rupture of components of the collection system. This would be considered a potentially significant impact.

Anaerobic (oxygen-deficient) decomposition of organic materials within landfill waste results in the generation of methane, an odorless and flammable gas. At concentrations between approximately 5 to 15% (lower and upper explosive limits, respectively) in air, methane becomes explosive. The presence of methane at the Old East Pleasanton Landfill has been evaluated and detected, prompting the installation of a landfill gas migration control system. The system was designed to maintain

methane levels below the lower explosive limit (LEL, 5%) and below federal limits (1.25%) for building interiors. The system includes several gas extraction wells, a mechanical blower, and an enclosed flare to burn off collected gas. In addition, soil gas probes have been installed at the perimeter of the landfill to monitor the migration of landfill gases generated at the site. When methane is generated from landfill waste it can migrate laterally underground through unconsolidated material and surface a distance from the original waste material. The results of initial monitoring of the perimeter probes indicated that methane levels at eight of eleven locations were below the LEL and indoor air limits. However, three locations at the eastern and southern boundaries of the site had methane levels (ranging from 17 to 49%) that exceeded both standards. Therefore, it is possible that development in areas adjacent to the landfill could be subject to adverse impacts of methane migration from the landfill. Accumulation of methane in structures could result in flammable or explosive conditions, possibly causing injuries or loss of life. This would be considered a potentially significant impact if not properly mitigated.

Impact
4.9-4

Exposure to Electromagnetic Fields. The existing 60-kV electrical powerline in the central portion of the project site could present a possible health risk related to electromagnetic fields (EMFs) to students at the proposed elementary school. This would be considered a potentially significant impact.

One Pacific Gas & Electric Company (PG&E) electrical overhead transmission line (60-kV) traverses the project site. The transmission line runs north to south across the central portion of the site. Transmission, distribution, and utilization of electricity generates electromagnetic fields (EMF).

There is public concern that EMF generated by transmission lines may have carcinogenic and other adverse human health impacts. Several epidemiological studies have been published over the past 15 years that have examined possible associations between EMF exposure and various health effects, including cancer, in both occupational and community settings. A recent study conducted by the National Cancer Institute found little evidence to conclude that children living in homes characterized by high measured, time-weighted average magnetic-field levels or by the highest wire-code category have an increased risk of developing acute lymphoblastic leukemia. Although conclusive evidence of adverse health effects related to EMFs have not been demonstrated, the California Department of Education has adopted recommended setbacks for schools from powerline easements. For purposes of this EIR, it is assumed that the exposure of students at the proposed school to the line could be potentially significant if not properly mitigated.

Impact
4.9-5

Increased Wildfire Risk. The proposed project would increase the number of structures and population in the Specific Plan area. More intensive use of the project site could result in the increased potential for wildfires, potentially causing damage to structures, destruction of habitat, and personal injury. This would be considered a potentially significant impact.

The upland area in the southern portion of the project site is identified in the City General Plan as an area of “High” to “Extreme” wildfire hazard. The semi-arid climate of the site is designated as Fire Weather Frequency Class II by the California Division of Forestry. The steep terrain of upland area

presents a relatively high potential for rapid spread of fire. The steepness of the topography and limited accessibility also increases the response time for fire fighters responding to wildfires and can present restrictions on fire control measures. The combination of the dry climate and steep terrain increase the potential for damaging wildfires. If not mitigated, the potential for fires could result in damage or destruction of homes and injuries or death. In addition, fires can have adverse impacts on wildlife habitat. These impacts would be considered potentially significant.

Impact
4.9-6

Hazards Posed by Steep Slopes. Steep channel banks along Arroyo del Valle and adjacent unreclaimed aggregate mining pits filled with water may present attractive nuisances that could result in accidents and injury. This would be considered a potentially significant impact.

Under current conditions, the south banks of Arroyo del Valle are steep, high, and relatively unstable. In addition, the Specific Plan includes, as a previously approved option, aggregate mining in the northeastern portion of the site (Lot 21). The resulting mining pit(s) would have steep (2:1) sideslopes surrounding a lake formed by groundwater flow into the mining pit(s). Proximity of these slopes to the proposed project presents the potential for people within the Specific Plan area to be exposed to an increased risk of injury caused by falls. The arroyo and mining pits present an attractive nuisance for people interested in swimming or exploration of the arroyo. The presence of water in the arroyo and mining pit(s) presents the possibility for drowning accidents. This would be considered a potentially significant impact if not properly mitigated.

Impact
4.9-7

Exposure to Disease-Bearing Organisms. The proposed project would attract additional people to residential areas near water sources (e.g., aggregate mining pits, creeks, detention basins, ditches, grassy swales) that can provide active breeding sites for disease-bearing organisms, potentially causing a disease transmission and an environmental nuisance problem. This would be considered a potentially significant impact.

The encephalitis virus and other vector-borne diseases can be transmitted by mosquitoes. A vector is any organism that transmits parasitic microorganisms, and the diseases they cause, from person to person, or from infected animals to human beings. Encephalitis is an inflammation of the brain that can be caused by bacterial or viral infection. There are no vaccines or specific treatments for human cases of encephalitis. Stagnant water, typically found in creeks, ditches, retention basins, temporary rainwater ponds, and other water bodies, can be used as breeding areas for mosquitoes. Stagnant water sources are currently found on and near the project site. On- and off-site water features for storm water management may be proposed for developments within the Specific Plan area.

The Alameda County Mosquito Abatement District (ACMAD) inspects and treats areas in and around Pleasanton to reduce the number of mosquitoes and other insects, and thus the potential for transmission of vector-borne public health diseases. ACMAD also has a sentinel program to monitor for mosquito-borne encephalitis. The sentinel program has had no recent detections of mosquito-borne encephalitis in the area of the project site. Other measures to reduce potential mosquito breeding areas include proper construction of water retention areas.

According to ACMAD personnel, mosquitoes are not the only vector problem in and near the project site. The valley black gnat, which poses an environmental nuisance, is commonly detected with monitoring equipment in the Livermore Valley area. The valley black gnat may be a vector of some human disease, but no public health diseases have been implicated in association with this organism. Gnat larvae are found in clayey soils and are released when the soil cracks because of dessication. The gnats can be a public health nuisance by biting humans, causing prolonged skin irritation for approximately 5 days following the bite. The ACMAD disseminates information to the public to avoid contact with these organisms during their peak season, which is generally April through June. These impacts would be considered potentially significant.

Impact
4.9-8

Worker Exposure to Hazardous Demolition Waste. Project site workers involved in demolition or renovation activities could be exposed to lead-based paint and asbestos-containing building materials, potentially causing adverse health effects. This would be considered a potentially significant impact.

Existing structures within the Specific Plan area may have been painted with lead-based paint or may contain asbestos-containing materials, which could be a health hazard for workers involved in demolition or renovation activities. Many homes and structures built before 1978 had lead-based paint, which was banned for use in housing by the federal government in 1978. Asbestos is a known occupational carcinogen. Exposure to lead and asbestos by demolition/construction workers would be primarily via the inhalation exposure route by disturbing building materials during demolition.

Federal and state regulations govern the demolition or renovation of structures where lead- or asbestos-containing materials are present. All loose and peeling lead-based paint would require removal prior to demolition. Federal, state, and local regulations also require the removal and proper disposal of asbestos or suspect asbestos-containing materials prior to demolition. All lead-based paint and asbestos removal activities must be conducted by trained workers under the direction of an appropriate health and safety plan to minimize potential exposure. This would be considered a potentially significant impact.

Impact
4.9-9

Releases of Hazardous Materials During Construction. Transport, storage, or handling of fuels, lubricants, and other hazardous materials for heavy machinery operation and maintenance during site development activities could release hazardous materials within the Specific Plan area. This would be considered a potentially significant impact.

Site preparation and project construction would be conducted using diesel-powered equipment. It is possible that the fueling and maintenance of this equipment would be undertaken on the site. Fueling and vehicle maintenance would involve the use of diesel, motor oils, lubricants, and other hazardous materials. Also, hazardous materials (e.g., paints, curing agents) would be brought into the Specific Plan area during site construction activities. Transport, storage, or handling of these materials may result in release of hazardous materials to the environment. This would be considered a potentially significant impact.

4.9.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.9-1
mitigation

Agricultural Chemical Use. All vineyard and other agricultural use operators shall notify adjacent landowners at least 24 hours prior to the application of any pesticide sprays or dust.

Application of any pesticides by spraying or dusting shall be restricted to periods during which wind speeds are less than 5 miles per hour. Aerial spraying shall not be permitted.

Prior to development of Lots 1, 2, 18, 19, 21, 22, 26, 28, 30, and 31, where a nursery or significant agricultural operations now exist or once existed, a Phase I Environmental Site Assessment shall be conducted by a qualified environmental professional in accordance with the requirements of the American Society for Testing and Materials (ASTM 1997). If the findings of the Assessment indicate the presence of, or potential for, hazardous materials use associated with the current or past agricultural uses of these sites, a Phase II Environmental Site Assessment shall be conducted by a qualified environmental professional to ascertain whether past or current land uses have contributed to soil and/or groundwater contamination at the site. Soil and groundwater samples collected during the Phase II Assessment shall be submitted to a California-certified laboratory for analysis.

The analytical results of the Phase II Assessment shall be evaluated by a qualified environmental professional to determine whether chemicals could pose a hazard to future site users, construction workers, or the environment. If chemicals at the site could pose a hazard, a qualified professional shall conduct a risk assessment to quantify hazards based on soil and/or groundwater sampling results, and develop appropriate remediation measures, as necessary, to reduce potential risks for future site users to acceptable levels. Potential remediation measures may include, but not be limited to, soil removal, capping with an impermeable cover, soil vapor extraction, and groundwater remediation and/or monitoring. Regulatory agency oversight shall be obtained, as appropriate, from a local or State agency.

An inventory of the interior areas of all on-site agricultural structures shall be conducted by an environmental professional prior to their demolition. If hazardous materials are identified as being stored in these areas, such materials shall be transported to and disposed of/recycled at an appropriate off-site facility. Monitoring by an environmental professional during the removal of floors/foundations shall be conducted to determine if hazardous materials spills are present or suspected to have occurred in these areas. After demolition, a report by

the environmental professional shall be submitted to the City delineating whether hazardous materials appeared to be present below the floors or foundations.

If hazardous materials are present, a soil-sampling plan shall be prepared and implemented prior to disturbance of native soils. The soil samples shall be collected by a qualified environmental professional and submitted to a California-certified laboratory for analysis. The analytical results shall be evaluated by a qualified environmental professional for development of an appropriate health and safety plan for construction workers involved in site-demolition activities, waste-disposal options, and potential site investigation/remediation.

impact
4.9-2
mitigation

Landfill Hazards. A Health Risk Assessment (HRA) shall be prepared for the City by a qualified health risk professional for use of Lot 14 as a City park. The HRA shall evaluate the existing data on air, soil, and water quality from the site to determine if additional sampling and testing is required. The HRA shall be prepared in conformance with U.S. Environmental Protection Agency (EPA) and CalEPA guidelines. If the HRA indicates that park use of the site is appropriate, the Parks and Community Services Department shall prepare a worker Health and Safety Plan for development, operation, and maintenance of the proposed park. If the HRA concludes the site has unacceptable health risks, then either 1) a remediation plan shall be prepared for approval by U.S. EPA and CalEPA, and the specified remediation measures shall be implemented; or 2) the Plan shall be modified to accommodate another use.

impact
4.9-3
mitigation

Release of Landfill Gas. The City shall attempt to obtain as-built drawings of all components of the methane gas collection system on Lot 14. If obtained, these records shall be maintained at the Building Inspection Department to ensure that any excavations made during park construction or operation do not rupture components of the system. The Department shall establish a protocol for all excavation activities (including drilling) that require the evaluation of the gas collection system drawings prior to the commencement of activities.

All aboveground components of the methane gas collection system on Lot 14 shall be protected with locked fences or other secure enclosures to prevent public contact with these facilities for as long as they are needed.

The design of the proposed park shall generally avoid any features that would require removal of the existing cover or excavation into the landfill materials. Should excavation into the landfill materials be required (e.g., for utilities or building foundations), the excavations shall be made under a worker health and safety plan prepared by a Certified Industrial Hygienist.

All development projects on lands adjacent to the landfill on Lot 14 shall conduct a gas survey to determine if significant gas migration from the landfill is affecting the

development site. The results of the survey shall be used to determine if standard construction of structures is appropriate or if non-standard foundation/building ventilation systems should be required.

impact
4.9-4
mitigation

Exposure to Electromagnetic Fields. The California Department of Education has adopted recommended setbacks for schools from powerline easements. The proposed school shall conform with the guidelines established by the California Department of Education for setback of schools from electrical power line easements.

impact
4.9-5
mitigation

Increased Wildfire Risk. An Open Space Fire Management Plan shall be prepared by developers of each lot which contains Open Space and shall be submitted to, and approved by, the Livermore-Pleasanton Fire Department prior to the issuance of occupancy permits for homes in the Specific Plan Area. The Plan shall propose specific measures to reduce potential fire hazards, including construction of buffers between homes and regular maintenance and disking of the property lines. If appropriate, the Plan may also specify the planting of “wet bands” between the residential development and open space areas.

All brush and other flammable materials shall be cleared within at least 30 feet of new homes. Ornamental landscaping shall emphasize the use of fire-resistant species.

impact
4.9-6
mitigation

Hazards Posed by Steep Slopes. Minimum six-foot high fencing shall be installed along the steep banks of Arroyo del Valle and all mining pits within the Plan Area to reduce the potential for recreational use of these areas. Signs shall be posted cautioning of steep, unstable slopes and potential drowning hazards. In addition to this provision, the stability of slopes along the arroyo shall be evaluated and modified, if necessary, to be made stable under short- and long-term conditions (see Impact 4.2-2).

impact
4.9-7
mitigation

Exposure to Disease-Bearing Organisms. The developers of land containing detention basins, springs, ponds, etc., shall contact the Alameda County Mosquito Abatement District (ACMAD) for assistance in controlling and managing potential disease-bearing vectors and their breeding areas, to reduce the potential for transmission of public health diseases associated with these organisms. The ACMAD shall also be consulted for assistance in the control and management of other organisms (e.g., Valley black gnat) and their breeding areas that pose an environmental nuisance. The owners of such developments shall be responsible for implementing all applicable recommendations of the District.

impact
4.9-8
mitigation

Worker Exposure to Hazardous Demolition Waste. Demolition of all structures shall be conducted in accordance with applicable requirements of the California Department of Industrial Relations (Cal OSHA) for lead, with appropriate follow-up measures taken if lead-based paint is found.

Demolition of all structures shall be conducted in accordance with requirements of Cal OSHA and the Bay Area Air Quality Management District (BAAQMD) for asbestos, with appropriate follow-up measures if asbestos is found.

impact
4.9-9
mitigation

Releases of Hazardous Materials During Construction. A Spill and Pollution Prevention Plan shall be prepared by the developer of each project with soil disturbance (e.g., grading) of at least 5 acres. The Plan must (1) be prepared prior to the start of earthwork activities; (2) designate an on-site employee responsible for Plan implementation; and (3) include anticipated equipment needs and maintenance, emergency response procedures for hazardous materials releases, and procedures for contacting designated regulatory agencies in the event of a hazardous materials release.

Notification of the Underground Services Alert (USA), as well as site tenants shall take place prior to groundbreaking to obtain information on the location of possible underground utilities.

Removal of above-ground or underground fuel tanks shall take place in accordance with the requirements of the Livermore-Pleasanton Fire Department, if these are to be removed as part of development under the Specific Plan.

4.9.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

4.9.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the requirements of the Specific Plan and compliance with existing state and federal regulations, all public health and safety impacts would be reduced to a less-than-significant level.

4.10 VISUAL

4.10.1 EXISTING SETTING

The following provides a narrative overview of the site's visual characteristics. In order to identify the visual setting within the proposed project area and immediate vicinity, the area was walked, driven, and photographed, and relevant sections of the City's General Plan were reviewed.

CHARACTER OF THE SITE

The proposed project area is located between the City's existing urban edge and Ruby Hill, a new residential community. The project area is bounded on the north by the Arroyo del Valle, a broad drainage lined by riparian vegetation, and to the south by tree covered hills. The site serves as a transition separating the urban areas to the west from more rural areas to the east. Between these areas the site maintains a semi-rural character composed of grass fields, old orchards, a vineyard, clusters of native (oak woodlands) and non-native trees, ranchettes, barns and other outbuildings.

Vineyard Avenue links Pleasanton to the Livermore wine country to the east. It is a two lane rural road with edges defined by crushed rock shoulders, wire fences, wood utility poles and overhead lines, and trees in some areas. Three visually distinctive subareas occur along Vineyard Avenue, as identified in Exhibit 3-4, Site Lot Map.

Subarea 1 is located in the westernmost portion of the project area (Lots 1-17), along the south side of Vineyard Avenue (approximately 1,900 linear feet of roadway). The landscape in this area is composed of grass covered hillsides gradually sloping upward from the roadway, forming small knolls. Small clusters of trees, wire fences defining property lines, semi-rural density residential development, and a landscape nursery are the dominant visual features in this area. Three residential neighborhoods (Vintage Hills, Foxbrough Estates, and Grey Eagle Estates) abut the subarea. Lots 8, 9, and a portion of Lot 13 are located on the north side of Vineyard Avenue, with characteristics generally similar to those already described.

Subarea 1 has a less rural and more suburban appearance than Subareas 2 and 3 because of its close proximity to existing residential development and lack of distinguishing visual characteristics. However, these traits also establish Subarea 1 as an obvious area of transition between urban and rural areas.

Subarea 2 is located along the northern side of Vineyard Avenue (Lots 18-21 and 32-33). Foreground views of this Subarea from Vineyard Avenue consist of broad grassland that slopes away from the roadway toward Arroyo del Valle. Individual trees, two abandoned orchards, and vegetation lining three drainages that traverse the area briefly interrupt the grassland. Views are blocked in some locations by stands of trees that line the roadway. Several small houses and buildings can be seen dispersed through the grass areas.

Middle ground views in Subarea 2 from Vineyard Avenue include the riparian vegetation that lines the edges of Arroyo del Valle and the structures (towers, conveyor belts etc.) and stock piles of materials used by the RMC Lonestar quarry operation located immediately north of the Arroyo. Quarry facilities

can be seen from viewpoints throughout the Plan Area, but are most prevalent in the central portion where views are almost unobstructed. In other areas trees provide partial screening.

Background views in Subarea 2 are dominated by Mount Diablo, the Altamont Pass area, and the rolling hills that connect them. Less prominent views include those of distant residential development and quarry operations. The grasslands that line the north side of Vineyard Avenue create a strong rural image; however, this image is somewhat diminished by background views of quarry facilities.

Subarea 3 is located south of Vineyard Avenue and east of Subarea 1. It consists of grass and tree covered hills rising above Vineyard Avenue and the grasslands. The terrain in Subarea 3 is generally steep to very steep, leveling along ridges, and in small bowls or valleys generally hidden from view of Vineyard Avenue. Because of the steep terrain and dense vegetation, only about one-third of the Subarea can be seen from Vineyard Avenue. The ridges and hilltops within Subarea 3 form part of a greater ridgeline that skirts the south east side of Pleasanton, serving as a distinctive backdrop to the site when viewed from outlying areas.

In many locations, views into Subarea 3 from Vineyard Avenue are blocked by trees and/or steep cut banks that line the roadway. Two key views in Subarea 3 include the grass covered slope that parallels Vineyard Avenue on Lots 22 and 23 (approximately 200- to 250-foot setback area of undeveloped hillside), and the meadow, foothills, and oak covered hillside area of Lots 27-29. Eight homes have been developed in Subarea 3. However, some of them are located in highly vegetated areas or within valleys, making it difficult or impossible to see them from Vineyard Avenue.

VIEWS OF THE SITE

Approximately two-thirds of the project area (most of Subarea 3 and portions of Subarea 1) is at an elevation that is substantially higher than nearby urbanized areas, with the highest elevation (700 feet) occurring at the southwestern corner of Lot 22. Most of the tree covered hills that compose Subarea 3 can be seen from off-site viewing locations, as can the upper reaches of Subarea 1. Although an attractive naturalistic backdrop to the project area, Subareas 3 and 1 are not pristine. Several light colored homes built on hilltops and access driveways are visible from off-site. Residential development areas with similar characteristics surrounding the westernmost portion of the Plan Area can also be seen (adjacent to Subarea 1) from off-site viewing locations.

When entering the Plan Area from the west along Vineyard Avenue, major portions of the grass covered sloping hillsides found in Subarea 1 can be seen. This Subarea is partially surrounded by residential development. Although the density of development is generally low, the view of this Subarea has a less rural appearance than other portions of the project site.

When entering the project area from the east, on Vineyard Avenue, travelers pass the Ruby Hill residential development (south side of roadway). The homes within this development are setback a substantial distance from the roadway. The setback area is being developed with vineyards. The edge condition between the roadway and vineyards includes a crushed rock shoulder, stone column and board fences, and decorative street tree planting. The improved vineyard enhances the area's rural

appearance. The north side of the roadway abuts the Arroyo del Valle. Unobstructed views of the quarry facilities across the Arroyo dominate middle ground views.

Views toward the project area from the east focus on portions of Lots 21, 26, 27, 28 and 32. Views of these lots are prominent because travelers enter the project area in an almost perpendicular alignment, offering a direct line of sight. Lots 21 and 32 are located within Subarea 2 (north side of Vineyard Avenue) and are composed of broad grassland, two old barns and an abandoned orchard. Lots 26, 27, and 28 are located within Subarea 3 (south side of Vineyard Avenue), and provide middle ground views of grass and oak-covered hillsides, and an undulating ridgeline. Two ridgeline homes can be seen as well. This area has a strong rural quality.

Panoramic views of the site are available from many viewpoints located north of Arroyo del Valle. The most prominent public viewing location of the site from the north is from the entry drive to Shadow Cliffs Regional Recreation Area, which is located directly across Arroyo del Valle from Subareas 1 and 2.

Views of the project site from Stanley Boulevard are very similar to those from the entry to Shadow Cliffs. However, Stanley Boulevard is a well used four-lane road lined by numerous visual distractions caused by gravel industry facilities. These distractions draw the viewers attention away from the specific characteristics of the project area, and it is viewed as what can generally be described as a naturalistic backdrop to an industrial foreground.

Portions of the project area can be seen from locations along Interstate 580. However, because of the viewing distance it is somewhat difficult to discern specific details of the project area. Instead, the tree covered hillsides and ridges that make up Subarea 3 are viewed as a relatively undisturbed naturalistic backdrop to the southern side of the valley.

Relevant General Plan Policies and Programs

The General Plan provides the following statements and policies in the Land Use and Community Character Elements relating to the project in terms of its aesthetic quality:

Land Use Element - The Land Use Element indicates the Specific Plan should:

“be prepared to coordinate ...aesthetics.. and uses... which relate to the outlying wine country. An attractive gateway to the Livermore Valley wine country should be accomplished by developing Vineyard Avenue into a scenic road entry, preserving substantial open space, planting vineyards, and implementing a wine country architectural and landscape design theme throughout the corridor”

Policy 12: Preserve scenic and ridge views of the Pleasanton, Main and Southeast Hills Ridges.

Community Character Element

Policy 17: (Vineyard Corridor) Preserve the natural appearance of hillsides, promote a wine country architectural and landscape design character, and enhance the natural riparian appearance along Arroyo del Valle.

Program 17.1: Adopt design standards for the Vineyard Avenue Corridor Area.

4.10.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

The following criteria were used to evaluate the potential visual impacts that would be attributable to construction of buildings, infrastructure, and major site landscaping. For this analysis, the visual impacts would be considered significant if:

- ▶ the project would conflict with relevant General Plan goals, policies or programs;
- ▶ the project would have a substantial, demonstrable negative aesthetic effect; or
- ▶ the project would create intrusive light or glare.

SPECIFIC PLAN GUIDELINES

The Specific Plan includes guidelines intended to ensure that the visual character of the Plan Area is maintained. These guidelines are presented below. In addition, measures are included in the Specific Plan that are intended to reduce potential visual resource impacts to less-than-significant levels.

- ▶ Establish a mix of land uses that promote the Plan Area as the western entry to the Livermore Valley wine country and provide an appropriate transition between the existing urbanized edge of Pleasanton to the west and the Ruby Hill development to the east.
- ▶ Preserve the major ridgeline in the southern Plan Area, limit development of hilltop areas to homes that can be substantially screened from outlying views, and limit hillside development to areas that can physically and visually accommodate it without disrupting the natural character of the site.
- ▶ Ensure that future development of the hilly areas located south of Vineyard Avenue is designed to emphasize the rural character through careful siting of buildings, minimal disruption to the physical terrain, and sensitive architectural and landscape treatment.
- ▶ Establish a unified site planning, architectural, and landscape character for future development of Lots 18, 19, 21, and 28 that draws from the character of the Livermore Valley wine country as well as from the approved Ruby Hill architectural design concepts, and the traditions of Southern European “vineyard village” design.

- ▶ Establish Vineyard Avenue as a scenic entry to the wine country through the use of rural road standards, implementation of a generous landscape program that features native tree plantings, colorful landscape accents and compatibility with the Ruby Hill landscape design program.

PROJECT ANALYSIS

Potential visual impacts resulting from the implementation of the proposed project were determined by reviewing two visual computer simulations, conceptual land use and site plans, and the Residential and Commercial Design Guidelines contained in the Specific Plan.

The computer generated photo simulations show what the proposed project would look like from viewpoint locations identified by staff and the consultant. The simulations are representations of the proposed project superimposed over photographs of existing conditions. As shown in Exhibits 4.10-1 through 4.10-4, the simulations provide a depiction of how the project would relate to its surroundings in terms of scale and massing, and are used as tools of analysis. They are not intended to serve as artistic renderings of potential development. Prototype development scenarios for each site were prepared by the consultant following the preparation of development standards included in the Specific Plan. The simulations were prepared using a three dimensional AutoCad Release 14 computer model, using topographic and vegetation data collected from an aerial survey taken of the Plan Area, and the prototypical development scenarios.

PROJECT IMPACTS

Impact
4.10-1

Visual Changes in Subarea 1. Development of the proposed project would alter the visual character of the Subarea 1 by constructing up to 50 homes and a community park on land that is now substantially undeveloped. Most of the views of the site in this subarea would depict a project generally compatible with its surroundings. Development of Lot 12, however, could appear more dense and the visual impact would be potentially significant.

Fifty low density homes would be built in Subarea 1 (Lots 1-17). Proposed development in this Subarea can be characterized as being similar to the existing suburban residential development that surrounds it, but less dense. New homes would be built on what are currently grass covered hillsides, in undeveloped areas around single family homes already built in the Subarea. The Specific Plan includes Residential Development Standards and Design Guidelines. These would work to guide the development of neighborhoods and homes to be generally compatible with adjacent, existing neighborhoods.

New homes in the Subarea would be seen from Vineyard Avenue, Stanley Boulevard, Montevino Drive, Foxbrough Court, Gray Fox Court, and from other homes that bound the Subarea. The Subarea's appearance would change from semi-rural to suburban. Although evident, this change in the appearance of the landscape would not be out of character with surrounding development. However,

development on the southern portion of Lot 12 could significantly alter the character of the landscape when viewed from existing nearby neighborhoods. The currently undeveloped hillside that makes up the southern one-third of Lot 12 could be developed with homes, resulting in what could appear to be a more dense development pattern, not in keeping with the desired low-density appearance of Subarea 1. In addition, if located within the highest portion of the site, and in close proximity to one another, these homes could be seen silhouetted against the skyline and could block distant views of Mt. Diablo from residents to the south. This would be considered a potentially significant impact.

Development proposed for Subarea 1 would also be evident from Interstate 580, but would not be distracting. Viewing distance and compatibility with the existing developed landscape would allow the project to generally blend in with its surroundings.

A 20-acre community park would be developed on Lot 14. Uses proposed for the site could include passive and active recreation activities, including non-illuminated play fields. Landscaped buffer areas would be installed between public activity areas and adjacent residential uses. The appearance of the site would change. The proposed project would result in the removal of vehicles, outbuildings, and supplies currently stored on the site. The proposed project would include the implementation of a landscape master plan, improving the site's overall appearance.

Impact
4.10-2

Visual Changes in Subarea 2. Development of the proposed project would alter the visual character of Subarea 2 by adding up to 72 homes, a school, and possibly a bed and breakfast inn on land that is mostly undeveloped. Most development would be visually unobtrusive or consistent with the rural character of the area. Therefore, the visual impact of project development of this area would be less than significant.

Subarea 2 would be developed with medium density homes, a school, and possibly a small bed and breakfast inn. The residential development would be clustered into three “vineyard villages”, located on Lots 18, 19, and 21. A single vineyard estate home would also be developed on each of these lots. Each cluster of development would be surrounded by vineyards (serving as a buffer between homes and Vineyard Avenue, similar to Ruby Hill) and intermittent drainages. The Design Guidelines recommend the creation of a cohesive circulation, landscape and architectural theme for each clustered neighborhood that would embody the characteristics of “rural European...wine-country”. The proposed project would accomplish this by establishing compact nodes of development surrounded by vineyards, rather than dispersing development and reducing the amount of visually contiguous grape growing areas. The four homes located within the vineyard areas would be estate homes, associated with each vineyard. Views of residential development in this Subarea would be from vistas along Vineyard Avenue, and from Subarea 3.

The school site would be located on portions of Lots 18 and 19. It would be separated from adjacent uses by roads, intermittent drainages and open space. It would appear relatively unnoticed from the realigned Vineyard Avenue since it would be setback behind 6 acres of play fields. Development in Subarea 2 could not be seen from viewpoints north of the Arroyo because of previously described riparian vegetation.

A home or bed and breakfast inn could be built on Lot 32 along the easternmost edge of Subarea 2, across the street from the existing fire station. The home or inn would be characteristically similar to the proposed vineyard village residential area. Its architectural style and massing would reflect the area's intended "rural European...wine country" theme. This would be ensured by following the Design Guidelines, and design review process.

The proposed vineyard villages would introduce a new pattern of residential development to Subarea 2. The proposed development pattern would look somewhat similar to Ruby Hill when viewed from Vineyard Avenue. It would not be consistent with the area's existing development pattern, but would be in keeping with existing goals of maintaining the area's rural character and enhancing its appearance as a wine growing region, and would not result in an adverse visual impact.

Impact
4.10-3

Visual Changes in Subarea 3. Development of the proposed project would alter the visual character of Lots 22 through 31 by adding up to 67 homes on land that is mostly undeveloped. Development would be visually compatible with surrounding areas with clustered neighborhoods bounded by vineyards, and steep hillsides. Development is not intended to be visually prominent and in most cases, would minimally be visible from Vineyard Avenue. Therefore, the visual impact of project development of this area would be less than significant

Changes in Subarea 3 (Lots 22-31) would include vineyard village and hillside residential development types. The vineyard village concept would be implemented on Lot 28, where up to 17 units would be clustered, as shown in Exhibit 4.10-2. In this setting the concept would vary slightly from the prototype because the clustered neighborhood would be bounded by vineyards, steep hillsides, and a low-lying wetland area. As shown in the simulation, development would be located in a gently sloping area (development on Lot 28 is shown on the left side of the roadway alignment), bounded to the south and west by oak covered hillsides, and to the north and east by vineyards. Development of Lot 28 would be, as previously described in the analysis of Subarea 2, the vineyard village prototype. The Specific Plan design guidelines require the installation of buffer planting in the area adjacent to Vineyard Avenue where vineyards would not be installed. The development on Lot 28 would not adversely affect the oak woodland or ridgeline. The proposed area-wide vineyard theme would be implemented and natural landscapes would be preserved. The clustered neighborhood on Lot 27 would be seen from the realigned Vineyard Avenue but would be different than the existing neighborhood. It would be developed in keeping with the goal of creating a semi-rural residential area, and would not result in an adverse visual impact.

An optional land use on Lot 28 would be an inn. This 100-room visitor-serving center would be developed in keeping with the area's desired rural character, and like the previously described vineyard villages, would be separated from Vineyard Avenue by a wetland area and vineyards, and would not disturb the oak covered hillside. Its character and massing would compliment the desired European village style, as prescribed in the Design Guidelines.

As many as 23 new residences could be built on Lots 24-27 and 29-31. The sites conceptually delineated for development would locate home sites within valleys or other areas that are not visually

prominent. Hillside Residential Design Guidelines apply to development on Lots 24-27, encouraging the use of special site planning, architecture and landscape architectural practices to minimize the visual impact of residential development. This type of site planning works to blend proposed development with the existing setting. The Design Guidelines indicate “medium to dark earthtone building colors shall be used. This will help to ensure that homes will not contrast against what is generally a dark-colored landscape (dark colored oak and other trees), an adverse visual impact.

Semi-Rural Residential Design Guidelines apply to Lots 29-31, encouraging the development in keeping with the area’s rural character. The proposed development would be consistent with adjacent existing development, and would not result in an adverse visual impact.

Up to 26 residences could be developed on Lots 22 and 23. As many as ten homes could be developed along the northern boundary of these two lots, adjacent to the existing Vineyard Avenue right-of-way, potentially adversely affecting foreground views (not including as many as three lots that could be built along the western boundary of Lot 22). This grass covered sloped area is not identified as a scenic hill or ridge, but it is highly visible from Vineyard Avenue and contributes to the project area’s semi-rural character. Homes built on the top of the slope could be seen from the existing Vineyard Avenue and from the proposed realigned Vineyard Avenue. The suburban character and perceived density of this development could detract from the project area’s semi-rural character. However, as shown in Exhibit 4.10-4, with the mitigation measures included in the Specific Plan, the development would not be visually obtrusive, nor would it detract from the Plan Area’s desired semi-rural character. As shown in the photosimulation, the grass covered hillside and oak trees seen in the background, would remain largely undisturbed. The proposed development of these lots would, therefore, result in less-than-significant visual impacts.

Impact
4.10-4

Visual Changes in the Circulation System. Development of the proposed project would alter the visual character of the circulation system in the project area. Proposed landscape treatments and undergrounding of existing utilities would improve the visual character of this system, thus creating a beneficial project impact.

The proposed project would realign Vineyard Avenue to the northernmost portion of Subarea 2 primarily on Lot 33, where it would curve northward from the existing alignment toward, and then generally parallel to, the Arroyo (between Lots 15 and 32). It would no longer be immediately adjacent to Subarea 3. Forming the northern border of Lot 32, it would curve toward the southeast and tie into the existing alignment (near the existing fire station). The new section of the alignment would extend through what would appear to be a largely rural setting. The north side of the roadway would be lined by riparian vegetation, and the south by vineyards. The new alignment would also introduce some new unobstructed views of the gravel mining facilities located across the Arroyo. The roadway alignment would generally not change in Subarea 1. The remaining portions of the existing alignment would be converted to local streets and bicycle and pedestrian paths, forming an interconnected project-wide circulation system.

The proposed project would introduce an area-wide streetscape program. The program for Subarea 1 would include a roadway berm and street trees. The proposed berm would effectively contribute to the Subarea's desired role as a transition area from suburban to semi-rural.

Immediately east of Lot 15 (edge of Subareas 1 and 2) along Vineyard Avenue, a primary landscape feature would be developed to signify the transition into the semi-rural setting. This feature would include a theme fence, signage, and planting that would embody the desired rural/vineyard characteristic landscape. A complimentary streetscape condition would be implemented along the remaining length of Vineyard Avenue. It would preserve large existing trees, introduce new clusters of trees strategically placed to frame or screen views, and be lined by a split rail fence. Secondary landscape features would be developed where local streets feed into Vineyard Avenue (near Lots 18, 19, 21, 32 and the fire station). The secondary features would be similar to, but less pronounced than the primary feature.

The proposed changes to the roadway, including the undergrounding of most overhead utilities, would introduce a cohesive streetscape program to the project area. It would also establish a transition from a suburban to a more rural setting. It would further work to establish the desired vineyard character for the Vineyard Avenue Corridor and not result in an adverse visual impact, and with the removal of overhead utilities, it would improve the area's appearance.

Impact
4.10-5

Increased Light and Glare. Development of the proposed project would create new sources of, and opportunities for light and glare in the project area. However, light and glare would be minor and consistent with the appearance of surrounding areas. This would be a less-than-significant impact.

The development of houses and street lights are not anticipated to generate significant glare within the project area or on the adjacent environment. Light and glare associated with the residential, commercial, community park and school would be similar to that already found in surrounding neighborhoods. In addition, the Specific Plan restricts the use of playfield lighting at both the proposed park on Lot 14 and the proposed elementary school on Lots 18 and 19. For these reasons, this impact would be considered less than significant.

4.10.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.10-1
mitigation

Visual Changes in Subarea 1

In order to minimize the potential visual impacts at the south end of Lot 12, the following additional standards shall apply:

- ▶ Not more than one lot shall be permitted to occupy the rear 200 feet of the existing Lot 12;

- ▶ Buildings on lots that are located within 300 feet of the existing Lot 12 rear lot line shall not exceed one story and 25 feet in height;
- ▶ An open-space band between the rear lot line of Lot 12 and elevation 520 shall be permanently maintained in its current condition. An open-space easement shall be granted over this area to the City at the time of final subdivision map recordation which restricts the use and improvements to livestock grazing, open fencing, underground infrastructure facilities, and storm-water drainage facilities. Solar collectors, dog runs, play structures and private roads shall specifically not be permitted within this area. A land management plan shall be prepared to establish private responsibility for permanently maintaining this open space land;
- ▶ Future buildings located to the north of the northerly boundary of the open space easement shall be constructed at least 40 feet north of the easement; and
- ▶ Grading on the ridge and north-facing slope of Lot 12 shall be carefully engineered to create natural and not geometric contours, with no slope exceeding a 3:1 grade.

impact
4.10-3
mitigation

Visual Changes in Subarea 3

Although significant visual impacts would not be anticipated in Subarea 3, the following additional standards shall apply to Lots 22 and 23 in order to minimize the effects of development along Vineyard Avenue:

- ▶ Buildings on lots which abut Vineyard Avenue shall not exceed one story and 25 feet in height;
- ▶ A continuous open space band of at least 30 feet in width (to be precisely determined at PUD development plan approval) shall be maintained between the southern right-of-way line of the existing Vineyard Avenue and any future fencing on Lots 22 and 23. An open-space easement over this area shall be deeded to the City at the time of final subdivision map recordation which restricts the use of this area to landscape planting and irrigation, infrastructure facilities, and storm water drainage facilities. No fencing shall be permitted within this area. A coordinated landscape and irrigation plan shall be designed for this area to screen the views of homes from outlying areas to the north. A landscape management plan shall be prepared to establish private responsibility for permanently maintaining landscape materials within this area. A coordinated fencing plan shall be prepared for the area immediately south of the southern edge of the open space band. Future buildings to the south of the open space band shall be located at least 30 feet back from the southern edge of the band.

Visual Changes in the Circulation System

Although significant visual impacts would not be anticipated with the proposed circulation system, the following additional standards shall apply in order to minimize the effects of development contiguous with Vineyard Avenue .

- ▶ A minimum six-foot-high landscaped earth berm shall be constructed along the Vineyard Avenue frontage of Lots 4, 9, 10, 11 and 13 (and Lot 8 if desired for the owner of this developed parcel); and a decorative masonry soundwall with landscaping shall be developed along the Vineyard Avenue frontage of Lot 1 and designed to complement the existing soundwall and landscaping on the north side of Vineyard Avenue.

Visual Changes in the Circulation System

Although significant light and glare impacts would not be anticipated, the following additional standards shall apply to minimize increases in night lighting.

- ▶ No play field lighting shall be allowed at the proposed park facility on Lot 14 and no play field lighting shall be allowed at the proposed elementary school on Lots 18 and 19. School outdoor lighting should be designed to direct illumination downward and screened on top to minimize glare impacts on residents located in the hillside areas to the south.

4.10.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

4.10.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

All of the visual impacts anticipated with Plan Area development would be reduced to less-than-significant levels following implementation of the Specific Plan measures.



View of the project site looking west along Vineyard Avenue near the eastern project boundary.

Source: EDAW, Inc., 1998.

Site Photograph

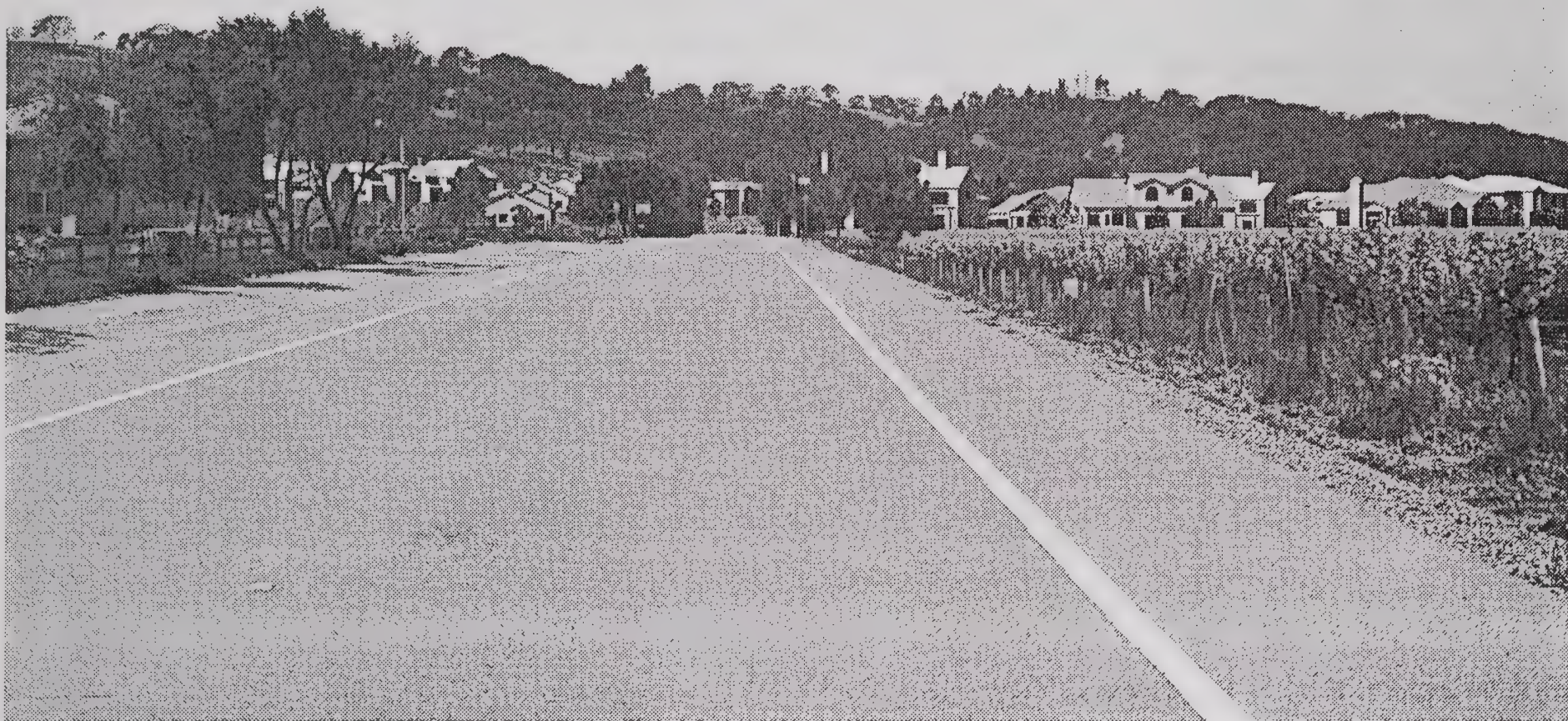


Photo simulation of the project site looking west along Vineyard Avenue near the eastern project boundary.

Source: EDAW, Inc., 1998.

Photo Simulation

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 7/98

EXHIBIT 4.10-2

EDAW



View of the project site looking east along Vineyard Avenue adjacent to Parcel 22.

Source: EDAW, Inc., 1998.

Site Photograph

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

IN 85002.01 6/98

EXHIBIT 4.10-3

EDAW



Photo simulation of the project site looking east along Vineyard Avenue adjacent to Parcel 22.

Source: EDAW, Inc., 1998.

Photo Simulation

4.11 CULTURAL RESOURCES

This section contains a discussion regarding the cultural resources of the project site and surrounding area. The information contained in this section was based on previously prepared documents as referenced below, a literature search conducted by the Northwest Information Center (NIC) located at Sonoma State University (NIC 1998), and a field survey.

4.11.1 EXISTING CONDITIONS

REGIONAL SETTING

The following regional setting information was summarized from the *Cultural Resources Assessment Report Vineyard Avenue Corridor Specific Plan City of Pleasanton, Alameda County, CA* (William Self Associates August 1998).

Prehistoric Background

The chronological sequence for central California and the Lower Sacramento Valley begins with the Windmill Pattern (Fredrickson 1973). Sites from this period date from about 4,500 (or earlier) to 3,500 years before the present (B.P.). Although earlier sites no doubt exist, sites from the Paleo-Indian Period, dating from about 12,000 to 8,000 B.P., and sites from an unnamed phase dating from about 8,000 to 4,500 B.P., are thought to be buried under Holocene alluvial deposits and are not well documented in this part of California (Ragir 1972). Various scholars have suggested Windmill sites are associated with an influx of peoples from outside of California who brought with them an adaptation to river-wetland environments (Moratto 1984:207).

Windmill sites are often situated in riverine, marshland and valley floor settings on small knolls above prehistoric seasonal floodplains. Most Windmill sites have possessed burials in what may be cemeteries. Typically, the remains are extended, oriented to the west, and contain copious amounts of mortuary artifacts. These artifacts often include large projectile points (spear or dart points) and a variety of fishing paraphernalia such as net weights, bone hooks, and spear points, as well as the vertebrate faunal remains of large and small mammals. Seed-grinding implements at the sites show that gathering and processing of seed resources was also common. Other artifacts such as charmstones, ochre, quartz crystals, Olivella and Haliotis shell beads in association with burial patterning and grave-good distribution suggest trade and a degree of ceremonialism may have been practiced.

The subsequent Berkeley Pattern (previously part of the middle Horizon) covers a period from about 3,500 to 1,500 B.P. in the San Francisco Bay region. This pattern overlaps somewhat with Windmill attributes at the beginning and with Late Prehistoric artifacts at the end. Berkeley Pattern sites are much more common and well documented, and therefore better understood, than Windmill sites. The sites are distributed in more diverse environmental settings, although a riverine focus is common.

Deeply stratified midden deposits (resulting from generations of occupation) are common to Berkeley Pattern sites, as are an abundance of milling and grinding stones for processing vegetal resources. Projectile points are progressively smaller and lighter over time, culminating in the introduction of the

bow-and-arrow during the late prehistoric period. As mentioned above, although there are shared traits with Windmill manifestations, artifacts unique to Berkeley Pattern sites include slate pendants, steatite beads, stone tubes and ear ornaments, and burial techniques utilizing variable directional orientation, flexed body positioning, and a general reduction of mortuary goods (Fredrickson 1973; Moratto 1984).

The late prehistoric period (formerly the late Horizon) ranges from about 950 to 150 B.P. This period, characterized as the Augustine Pattern (Fredrickson 1973), is typified by intensive fishing, hunting and gathering (particularly acorns), a large population increase, increased trade and exchange networks, increases in ceremonial and social attributes, and the practice of cremation (in addition to flexed burial). Certain artifact types also typify the pattern: bone awls for use in basketry manufacture, small notched and serrated projectile points indicative of use of the bow-and-arrow, some pottery, clay effigies, bone whistles, and stone pipes. The Augustine Pattern and the late prehistoric period can be characterized as the apex of Native American cultural development in this part of California.

There is debate as to the niche of the San Francisco Bay Area in regional cultural schemes. Historically, much of the debate centers around whether Bay Area prehistoric cultural patterns are totally separate from, parallel to, or convergent with the cultural evolutions of the Lower Sacramento region. Bickel (1981:6-11) presents a detailed historical analysis of the changes in thinking about the Bay Area's place in regional culture history over the years; further analysis of the various cultural interrelationships can be found in Hughes (1994), Fredrickson (1993) and Elsasser (1986).

Ethnographic Background

There is a considerable body of ethnographic literature on the Native American inhabitants of the project region. This section provides a brief summary of the ethnography of the area and is intended to provide a general background only. For a more extensive review of Ohlone ethnography, see Bocek (1986), Cambra (et al. 1996); Kroeber (1925), Levy (1978), Milliken (1983), and Shoup and Milliken (1994).

The project area lies within the region occupied at the time of historic contact by the Ohlone or Costanoan group of Native Americans (Kroeber 1925). Although the term Costanoan is derived from the Spanish word *Costaños*, or coast people, its application as a means of identifying this population is based in linguistics. The Costanoans spoke a language now considered one of the major subdivisions of the Miwok-Costanoan, which belonged to the Utian family within the Penutian language stock (Shipley 1978: 82-84). Costanoan actually designates a family of eight languages. Of these, Chochenyo or East Bay Costanoan was the language spoken by the estimated 2,000 people who occupied the ". . . east shore of San Francisco Bay between Richmond and Mission San Jose, and probably also in the Livermore Valley" (Levy 1978:485).

The other seven languages of the Costanoan family were spoken by tribal groups occupying the area from the Pacific Coast to the Diablo Range, and from San Francisco to Point Sur. Modern descendants of the Costanoan prefer to be known as Ohlone. The name Ohlone is derived from the Oljon group which occupied the San Gregorio watershed in San Mateo County (Bocek 1986: 8). The two terms (Costanoan and Ohlone) are used interchangeably in much of the ethnographic literature.

On the basis of linguistic evidence, it has been suggested that the ancestors of the Ohlone arrived in the San Francisco Bay area about 1,500 B.P., having moved south and west from the Sacramento-San Joaquin Delta region. The ancestral Ohlone displaced speakers of a Hokan language and were probably the producers of the artifact assemblages that constitute the Augustine Pattern described above (Levy 1978:486).

Although linguistically linked as a family, the eight Costanoan languages actually comprised a continuum in which neighboring groups could probably understand each other. However, beyond neighborhood boundaries, each group's language was unrecognizable to the other. Each of the eight language groups was subdivided into smaller village complexes or tribal groups. The groups were independent political entities, each occupying specific territories defined by physiographic features. Access to the natural resources of the territories was controlled by each group. Although each group had one or more permanent villages, their territory contained numerous smaller camp sites used as needed during a seasonal round of resource exploitation.

Leadership was provided by a chief, who inherited the position patrilineally and who could be either a man or woman. The chief and a council of elders served mainly as community advisers. Specific responsibility for feeding visitors, providing for the impoverished, and directing ceremonies, hunting, fishing, and gathering activities fell to the chief. Only in times of warfare was the chief's role as absolute leader recognized by group members (Levy 1978:487).

Extended families lived in domed structures thatched with tule, grass, wild alfalfa, or ferns (Levy 1978). Semi-subterranean sweat houses were built into pits excavated in stream banks and covered with a structure against the bank. The tule raft, propelled by double-bladed paddles similar to those that were used in the Santa Barbara Island region, were used to navigate across San Francisco Bay (Kroeber 1925).

Mussels were an important staple in the Ohlone diet as were acorns of the coast live oak, valley oak, tanbark oak and California black oak. Seeds and berries, roots and grasses, as well as the meat of deer, elk, grizzly, rabbit, and squirrel formed the Ohlone diet. Careful management of the land through controlled burning served to insure a plentiful and reliable source of all these foods (Kroeber 1925; Levy 1978).

The Chochenyo usually cremated a corpse immediately upon death but, if there were no relatives to gather wood for the funeral pyre, interment occurred. Mortuary goods comprised most of the personal belongings of the deceased (Levy 1978:490).

The arrival of the Spanish in the San Francisco Bay Area in 1775 led to a rapid and major reduction in native California populations. Diseases, declining birth rates, and the effects of the mission system served to largely eradicate the aboriginal lifeways (which are currently experiencing a resurgence among Ohlone descendants). Brought into the missions, the surviving Ohlone, along with former neighboring groups of Esselen, Yokuts, and Miwok were transformed from hunters and gatherers into agricultural laborers (Levy 1978; Shoup and Milliken with Brown 1994). With abandonment of the mission system and the Mexican takeover in the 1840s, numerous ranchos were established. Generally, the few Indians who remained were then forced, by necessity, to work on the ranchos.

Historic Background

The historic background of the site is divided into two periods: (1) the Spanish and Mexican Periods (1769-1848) and (2) the American Period (1848-Present).

The Spanish & Mexican Periods: 1769-1848

Numerous Spanish exploratory expeditions passed through the Pleasanton area during the Spanish era. These included expeditions led by Fages, Portola, Fages and Crespi, Anza, Rivera, and Moraga (Levy 1978:486). Initial historic exploration of the San Ramon, Amador and Livermore Valleys occurred between 1769 and 1810.

Following the era of exploration, four Spanish institutions were employed to settle Alta California: missions, presidios, pueblos, and ranchos. Of these, the missions were the most successful. The favorable descriptions of the study area by early explorers Portola and De Anza led to the establishment of Mission Santa Clara and Pueblo de San Jose de Guadalupe in 1777. Mission San Jose, established in 1797, would have had the greatest impact on the local Ohlone population within the study area (Hoover 1990:6). Historic records indicate that between 1802 and 1822, 4,573 baptisms and 1,376 marriages took place at Mission San Jose. During this same time span, 2,933 Ohlone died at the Mission and by 1822 there were only 1,620 surviving Ohlone (Baker 1914:449).

After Mexico seceded from Spain in 1822, grants of land to private citizens began. Following the secularization of the missions in 1833, the number of land grants increased substantially. The Livermore Valley was divided into three ranchos; on the eastern side of the Valley was Rancho de las Positas, owned by Robert Livermore; Rancho Santa Rita owned by Juan Bernal; and Rancho Valle de San Jose, which was centered in Pleasanton and owned by Augustine Bernal (Banks 1978:6).

During the Mexican Period (1822 to 1846) the project area was located in the northern section of Rancho Valle de San Jose (Beck and Hasse 1974:30). Within this huge rancho (51,000+ acres) were several adobe structures. Three are in Pleasanton near the project area: the Juan Bernal adobe and two Kottinger family adobes (Anastasio 1986:3). John W. Kottinger, one of the earliest Pleasanton settlers, married the daughter of Juan Bernal in 1851 and became the town's first store keeper sometime after 1852. Part of Kottinger's old adobe barn still stands on Ray Street just to the west of the project area (Hoover 1990:15).

The American Period: 1848 - Present

In 1848, California became a United States territory as a result of the Treaty of Guadalupe Hidalgo which ended war with Mexico. California was not formally admitted to the Union until 1850. The Gold Rush of 1849 brought a massive influx of immigrants to California from all parts of the world. California's 1848 population of less than 14,000 (exclusive of Indians) increased to 224,000 in four years.

After California was admitted as a state, Contra Costa County, one of the original 27 counties created by the California legislature, included what is today Contra Costa and Alameda Counties. In 1853, Alameda County was created from the western and southern sections of Contra Costa County. The

precursor to Pleasanton was a small settlement named Alisal, founded in 1857 when Duerr & Nusbaumer opened a store in John Kottinger's house. Kottinger, who had immigrated from Austria in 1851, married into the Bernal family and operated a livestock ranch on a portion of the Bernal rancho (Wood 1883:478). By the mid-nineteenth century the majority of Rancho lands were subdivided as a result of population growth in the Livermore-Alameda Valley. By the 1870s, Rancho Valle de San Jose had been reduced in size to 500 acres (Thompson and West 1878:119).

By 1864, the town of Alisal had a hotel and a school, in addition to the general store operated in Kottinger's house (Hinkel and McCann 1937:195). The town of Pleasanton was named in 1867 for General Alfred Pleasanton [sic]; the misspelling was apparently a clerical error when the post office was established on June 4, 1867 (Bard et al. 1992:26). The center of town moved south to the train station when the railroad arrived in 1869 and by 1876 Pleasanton had several hotels, some good stores, a post office, an express office, and numerous grain warehouses (Halley 1876:502). By the late 1870s, Pleasanton's population had grown to between 500 and 600 (Thompson & West 1878:25).

The rural areas surrounding the town of Pleasanton were particularly well adapted for livestock, and during the American Period a major industry in the project area was horse breeding (Fredrickson et al. 1978:33). Sheep, cattle, and angora goats were raised in the area, and other industries included timber harvesting from the mountainous regions, coal mining on Cedar Mountain and sandstone quarrying in the Altamont area (Wood 1883:479).

Pleasanton was incorporated in 1894. It remained a small farming community until after World War II when the opening of Parks Air Force Base and the Lawrence Livermore Atomic Research Laboratory launched a period of growth that transformed the small community into a suburban residential/office community (Anonymous 1954:4). New residential subdivisions were built in the Pleasanton area starting in the 1950s as highway improvements made commuting easier to Oakland and the East Bay. During the 1970s and 1980s, Pleasanton became one of the fastest growing areas in the Bay Area as numerous new subdivisions, two large business parks, and a regional shopping center were built in the area. Pleasanton, now a major suburban office/residential community at the southern end of the I-680 Corridor, has a population of over 62,000.

KNOWN CULTURAL RESOURCES AND PREVIOUS CULTURAL RESOURCE SURVEYS

A record search was conducted on July 30, 1998 by the staff at the Northwest Information Center, Rohnert Park, California. All known archaeological sites and previous cultural resource surveys within one-quarter mile of the Vineyard Avenue Corridor project boundary were researched. The National Register of Historic Places, the California Inventory of Historic Resources, and California Historical Landmarks Register were examined to determine if any county, state, or federal historic landmarks or National Register of Historic Places properties were located in the project area. No cultural resource sites have been recorded within the boundaries of the project area.

Previous Surveys

There was no record of cultural resource surveys having been conducted within the project boundary. Two cultural resource surveys have been conducted within one-quarter mile of the project area, Busby (1995) and Chavez (1987). No archaeological sites were recorded in either survey.

In addition to the sources mentioned above, information was gathered from the 1906 U.S. Geological Survey topographic map of the area, an 1864 General Land Office plat map, and from the 1878 Historical Atlas Map of Alameda County. These resources provided limited historic information on the location of possible structures, foundation remains or other historic resources within the project area.

Field Survey and Methodology

The archaeological field survey of the Vineyard Avenue Corridor project area was conducted on July 28-30, 1998 by William Self Associates staff archaeologists James M. Allan and Jason Reimers, and August 4 and 6, 1998 by Carrie D. Wills and Jason Reimers.

The strategy for the field survey was to conduct an intensive survey of the entire project area for which access was acquired. Steep slopes (over 45 degrees) were excluded as it was surmised that cultural resource deposits, either historic or prehistoric, were unlikely in these areas. They were, however, examined visually for the presence of historic debris or rock outcroppings that might have served as shelters or could contain petroglyphs or incipient mortars. Also excluded from the survey were parcels that have been fully developed, parcels that are known to have been graded, the parcel formerly used as a landfill dump site (Parcel 14), and five parcels for which access was not acquired. Of the 33 parcels, 11 were excluded from the field survey. See Table 4.11-1 for a summary of the field survey.

The survey utilized a transect interval spacing of approximately 30 meters (100 feet) or less, walked in a zig-zag pattern. Ground visibility on all but one parcel (Parcel 21) was very poor due to the density and height of the grasses and star thistle.

Survey Results

No archaeological sites, features or objects were observed during the survey. Four structures estimated to be over 45 years old were recorded on two parcels within the project area. The first, designated WSA-1, consists of a free-standing barn and a storage shed in the otherwise undeveloped 29.84-acre Parcel 21. WSA-2 is a free-standing barn and a structure that appears to be a storage shed on the otherwise fully-developed, 5.5-acre Parcel 31. The structures comprising WSA-1 and 2 appear to retain their original wood siding, although roofing materials may not be original in all cases.

The structures at WSA-1 both appear to retain some integrity of materials and workmanship and are in their original location. A residential structure stands adjacent to the barn at WSA-2. The residence appears to date after 1950, but the barn and storage shed appear to be of an earlier construction, both retain integrity of materials and workmanship and are in their original locations. The setting has been altered through the introduction of more recent structures, such as horse corrals and training rings.

Table 4.11-1
Summary of Parcels Surveyed

Lot No.	Acres	Owner	Address	Surveyed	Notes
1	5.00	Hatsushi	2756 Vineyard Ave.	N	Active plant nursery facility
2	5.02	Hatsushi	2770 Vineyard Ave.	Y	
3	5.02	Hatsushi	2798 Vineyard Ave.	N	Graded parcel
4	7.24	Nevis	2546 Vineyard Ave.	Y	
5	2.66	Halverson	751 Clara Ln.	N	Developed - no natural ground surface evident
6	2.45	Elgammal	865 Clara Ln.	Y	
7	2.49	Halverson	837 Clara Ln.	N	Developed - no natural ground surface evident
8	0.82	Allec	2538 Vineyard Ave.	N	Developed - no natural ground surface evident
9	2.40	Hubbard	2756 Vineyard Ave.	N	Graded parcel
10	2.64	Lutz Homes	Vineyard Ave.	Y	
11	2.37	Oetman	Vineyard Ave.	Y	
12	7.37	McGuire	Vineyard Ave.	Y	
13	1.90	Molinaro	Vineyard Ave.	Y	Partially graded parcel
14	20.62	Garbage Serv.	Vineyard Ave.	N	Landfill - no natural ground surface evident
15	2.65	Pietronave	2500 Vineyard Ave.	N	No access
16	2.43	Dominisse	Vineyard Ave.	N	Landfill - no natural ground surface evident
17	2.41	Homer	Vineyard Ave.	N	No access
18	35.38	Hahner	2287 Vineyard Ave.	N	No access
19	33.30	Lin	1689 Vineyard Ave.	Y	
20	0.87	Safreno	1627 Vineyard Ave.	N	Graded parcel
21	29.84	Lonestar	1465 Vineyard Ave.	Y	Recorded two structures
22	50.13	Berlogar	2200 Vineyard Ave.	Y	Surveyed drainage; very steep terrain
23	20.00	Chrisman	1944 Vineyard Ave.	Y	
24	20.00	Brozosky	1700 Vineyard Ave.	Y	Surveyed drainage; very steep terrain
25	20.19	Konig	1680 Vineyard Ave.	Y	Parcel too steep, surveyed level area at summit
26	20.51	Roberts	1666 Vineyard Ave.	Y	Surveyed drainage; very steep terrain
27	20.00	Goodwin	1630 Vineyard Ave.	Y	
28	21.30	Heinz	Vineyard Ave.	N	No access
29	7.70	Silver Bear	Vineyard Ave.	N	No access
30	7.11	Thibault	Vineyard Ave.	Y	
31	5.50	Fagliano	1364 Vineyard Ave.	Y	Developed. Recorded barn & storage shed only
32	0.30	Simoni	Vineyard Avenue	N	Graded parcel
33	7.6	Lonestar	Vineyard Avenue	Y	

California Department of Parks and Recreation Primary Record forms and photographs of the structures comprising resources WSA-1 and WSA-2 were prepared for submittal to the California Historical Resources Information System. They may be found in Appendix C.

Ground visibility was very poor on all parcels except for number 21. On Parcel 21, the ground cover was comparatively sparse in certain areas, providing fair to good visibility of the ground surface. Numerous concentrations of native lithic material (chert, quartzite, sandstone, etc.) were observed scattered around the parcel. None of the material appeared to have been culturally modified, but the leaseholder informed survey personnel that several "arrowheads" had been recovered from the property in the past and that a groundstone mortar had been recovered on the adjacent parcel to the east (outside the project area).

No additional historic sites or prehistoric sites, objects or features were observed within the survey area.

4.11.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Appendix K of the CEQA Guidelines states that a project will be considered to have a significant effect on cultural resources if it will "disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group . . .". In addition, CEQA contains provisions relative to preservation of historic and prehistoric cultural sites. Appendix K of CEQA directs public agencies to avoid damaging effects on an archaeological resource whenever feasible. If avoidance is not feasible, the importance of the site shall be evaluated " . . . as a means of determining impact and developing mitigation measures."

CEQA Appendix K, Section III, states that an important archaeological resource is one which:

- A. Is associated with an event or person of:
 - 1. Recognized importance in California or American history, or
 - 2. Recognized scientific importance in prehistory;
- B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;
- C. Has special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- D. Is at least 100 years old and possesses substantial stratigraphic integrity; or
- E. Involves important research questions that historical research has shown can be answered only with archaeological methods.

In addition, the significance of historic and prehistoric cultural resources is judged in accordance with the criteria for eligibility for nomination to the California Register of Historical Resources (as contained within the criteria for eligibility to the National Register of Historic Places as defined in 36 CFR 60.4). If resources are determined to be significant, and therefore eligible for California Register listing, they are afforded some degree of regulatory protection. Those resources determined not significant, that is, ineligible for Register listing, are subject to recording and documentation only, and are afforded no further protection under state or federal law. Occasionally certain resources, although they may not be assessed as 'significant', may nonetheless be of local or regional importance such that mitigation may be warranted or may result from public comment regardless of their assessed significance.

The National Register criteria state that 'eligible historic properties' are:

... districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that (a) are associated with events that have made a significant contribution to the broad patterns of our history;; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or (d) that have yielded or may be likely to yield, information important to history or prehistory.

To evaluate cultural resource sites against such broad criteria requires consideration, among other things, of the overall integrity of the site, the regional culture history (the types, ages and distribution of other sites in the region), and the nature of questions that researchers are attempting to address regarding the history or prehistory of the region.

Cultural site evaluation assesses the potential of each site to meet one or more of the criteria for "importance" based upon visual surface and subsurface evidence (if available) at each site location, information gathered during the literature and record searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site.

SPECIFIC PLAN GUIDELINES

The Specific Plan does not include guidelines addressing cultural resource issues, however, it does include measures that are intended to reduce potential impacts associated with cultural resources to less-than-significant levels. These measures are included at the end of this section.

PROJECT IMPACTS

Impact
4.11-I

Disturbance of Historic Resources. Development of the project site could include the disturbance of identified historic structures. Although many of the historic structures appear to retain integrity of design, materials and workmanship, they do not meet the criteria for eligibility to the National Register of Historic Places or the California Register of Historic Resources. Project impacts on historic resources would be considered less than significant.

Development of the project site could include the disturbance of identified historic resources. Many of the historic structures within the Specific Plan Area appear to retain integrity of design, materials and workmanship. However, the setting has been altered in most cases through the introduction of more recent buildings. Additionally, none of the properties appear to be associated with events or persons important in local or regional history, nor do they embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master. The structures are fairly typical vernacular barn and agricultural structures lacking in distinguishing or significant architectural characteristics. These structures would not meet the criteria for eligibility to the National Register of Historic Places or the California Register of Historic Resources. Because these historic structures would not meet these criteria, this impact would be considered less than significant.

Impact
4.II-2

Disturbance of Unidentified Cultural Resources. Development of the project site would include the removal of vegetation and surface soils through grading activities. Because Native American and historic cultural resources could be present on the project site, these grading activities could cause the disturbance of these resources. The disturbance of previously unidentified cultural resources would be considered a potentially significant project impact.

No cultural resources were identified during the field survey on the project site. However, it is possible that cultural resources may be present but are obscured by vegetation or are buried. Native American human remains may also be buried on the site. Development of the project site could cause the disturbance of these, as of yet, unidentified cultural resources and/or human remains. Also, parcels within the Plan Area that were not accessible during the field survey may include previously unrecorded cultural resources. The potential disturbance of cultural resources on the project site would be considered a potentially significant impact.

4.8.3 SPECIFIC PLAN MEASURES

The Specific Plan requires that the following measures be implemented with any development of the Plan Area. These measures have been integrated into the Specific Plan to minimize potential project impacts associated with site development.

impact
4.II-2
mitigation

Disturbance of Cultural Resources

- ▶ If any prehistoric or historic artifacts, or other indications of cultural resources are found once project construction is underway, all work must stop within 20 meters (66 feet) of the find. A qualified archaeologist shall be consulted for an immediate evaluation of the find prior to resuming ground-breaking construction activities within 20 meters of the find. If the find is determined to be an important archaeological resource, the resource shall be either avoided, if feasible, or recovered consistent with the requirements of Appendix K of the State CEQA Guidelines.
- ▶ In the event of discovery or recognition of any human remains in any on-site location, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the County

coroner has determined, in accordance with any law concerning investigation of the circumstances, the manner and cause of death and has made recommendations concerning treatment and dispositions of the human remains to the person responsible for the excavation, or to his or her authorized representative.

4.11.4 ADDITIONAL MITIGATION MEASURES

No additional mitigation measures would be necessary.

4.11.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the Specific Plan measures, impacts on cultural resources would be reduced to less than significant.

5 ALTERNATIVES TO THE PROPOSED PROJECT

5.1 PURPOSE OF THE ALTERNATIVES ANALYSIS

Section 15126(d) of the State CEQA Guidelines, as amended, mandates that all EIRs include a comparative evaluation of alternatives to the project that are capable of feasibly attaining most of the projects basic objectives but would avoid or substantially lessen any of the significant effects of the project. CEQA requires an evaluation of a “reasonable range” of alternatives, including the “no project” alternative. The project has a number of stated objectives (see Section 3). The most basic of objectives is the implementation of the Pleasanton General Plan, which specifies development of a Specific Plan for this project site, with a variety of residential, agricultural, and other uses that relate to the adjacent wine country. The Specific Plan includes the objectives of maintaining the existing semi-rural character of the Vineyard corridor, while allowing for the development of additional homes, vineyards, public facilities and, potentially, commercial uses.

The intent of this section is to evaluate alternatives capable of eliminating or reducing significant adverse impacts associated with the proposed project. Four alternatives are analyzed: 1) the no-project alternative, consisting of no development on the project site; 2) a 150-unit development alternative consisting of 39 fewer residential units than the proposed project; 3) a 250-unit development alternative consisting of 61 more residential units than the proposed project; and 4) a Vineyard Avenue alignment alternative that maintains the existing alignment of Vineyard Avenue but is otherwise similar to the proposed plan. In addition, the concept of an alternative location is considered, as discussed below, but is not a feasible alternative to the project.

The discussion below concentrates on substantial changes in project impacts anticipated with these alternatives in comparison with the proposed project. Areas not anticipated to change substantially are not discussed in detail. Conceptual plans of the alternatives are available for public review at the City of Pleasanton Planning Department, 200 Old Bernal Avenue, Pleasanton, California 94566.

5.2 NO PROJECT ALTERNATIVE

DESCRIPTION

The No Project Alternative would maintain conditions as they currently exist. None of the residential units identified in the Specific Plan would be developed. No commercial businesses, parks or school facilities would be built and the proposed vineyard areas would not be established. Vineyard Avenue would remain at its current location. Under the no project alternative, it is assumed that the project site would develop in a manner consistent with its current zoning. A total of 19 dwelling units are currently located on the site. Under current zoning, this could increase to approximately 106 units.

IMPACTS

Impacts associated with the no project alternative would generally be less in comparison to the project. Less open space would be converted, traffic generation would be less, and potential impacts to biological resources would be reduced. Other impacts related to the number of units constructed would be proportionately reduced. On the other hand, potential impacts to visual resources could be greater; although less of the site would be developed, if the site were not developed with design guidelines as proposed in the Specific Plan. Impacts associated with geologic hazards would be similar to the project, although fewer units would be affected.

The objectives of the project, including implementation of the Pleasanton General Plan, would not be met with this alternative. Further, public amenities including the proposed park and school would not occur, nor would Vineyard Avenue be realigned.

CONCLUSION

The no project alternative would be the environmentally superior alternative based on the minimization of environmental changes. Project objectives, however, would not be met with this alternative.

5.3 150-HOME DEVELOPMENT ALTERNATIVE

DESCRIPTION

This alternative assumes development of 150 new residential units. Lots west of the landfill (Lots 1-13) would be developed with housing at a density of one- to two homes per developable acre, while development on the remaining hillside lots south of Vineyard Avenue (Lots 15-17, 22-27, and 29-31) would have a lower housing density more related to the physical terrain. Housing on the lots north of Vineyard Avenue (Lots 18, 19 and 21) would be developed at three units per acre, with a vineyard estate on each lot. Lot 28 would be developed with a 100-room inn and spa (including a restaurant and conference facility) and a vineyard estate, while a small bed and breakfast inn is assumed to be developed on Lot 27 along with housing. Of the 381 total acres in this alternative (which excludes Lot 33, which is 3 acres), approximately 107 acres would be developed with residential uses, 67 acres would be vineyards, 158 acres would be open space, 8 acres would be visitor serving uses (hotel, bed and breakfast), 12 acres would be a school, 20 acres would be a community park, and 9 acres would be public street right-of-way. Vineyard Avenue would not be realigned with this alternative. The school site would be located entirely on Lot 18.

IMPACTS

Land Use

This alternative would reduce the land use density for the proposed project by approximately 20%. Changes in site land uses would include the relocation of homes on lots 18, 19, and 21 away from Vineyard Avenue to minimize noise levels at the proposed home sites and a redesign of the internal

circulation system for these lots. The proposed school site would also be moved toward the east end, entirely onto Lot 19, from Lot 18 (see Exhibit 3-5). The location of the playground and the school buildings would be reversed on the lot in order to minimize interior building noise from Vineyard Avenue. Because fewer homes would be built, less potential exists for land use conflicts between agricultural and residential uses and potential aggregate mining operations and residential uses. Also, slightly less open space land would be converted to suburban uses with this alternative. The land use impacts of this alternative would be less than with the proposed project.

Earth Resources

This alternative would slightly reduce the total area and volume of grading that would be required, thereby reducing anticipated erosion and downstream transport of sediments. This would be most evident in the steep southern portion of the Plan Area where fewer homes would reduce the need to grade. Also, because this alternative would not require the construction of a new roadway adjacent to Arroyo del Valle, less disturbance to soils adjacent to this drainage would be anticipated. The earth resource impacts of this alternative would be less than with the proposed project.

Hydrology and Water Quality

This alternative would have less stormwater runoff than the proposed project. With fewer homes, less impermeable surface area would be constructed, thus, greater stormwater absorption would be anticipated. Because more stormwater would be absorbed during storm events, urban pollutants and sediments would be less likely to flow into Arroyo del Valle. These water quality contaminants would be captured in the soil through percolation. Also, less soil would be disturbed with this alternative, minimizing sedimentation during construction activities and reducing the total area that could generate urban pollutants. Because this alternative would not require the construction of a new roadway adjacent to Arroyo del Valle, less direct erosion and sedimentation into this drainage would be anticipated. The hydrology and water quality impacts of this alternative would be less than with the proposed project.

Biological Resources

The preservation of slightly more open space associated with this alternative would reduce the loss of wildlife habitat on the project site. An increase in the site's open space would allow larger buffer areas and more contiguous habitat resource areas. Also, heritage trees could be more easily avoided through the strategic placement of homes on residential lots (although this avoidance is proposed with the project). The reduction in total area disturbed would be a benefit when compared to the proposed project. The biological resource impacts of this alternative would be less than with the proposed project. In addition, without the realignment of Vineyard Avenue adjacent to the Arroyo del Valle, the potential for pollutants transported by runoff to drain into the arroyo would be avoided.

Noise

Minor increases in traffic noise levels would be anticipated on local roadways with this alternative when compared to the proposed project. This increase in noise levels would be associated with an increase in the number of vehicles generated from the commercial uses when compared with the reduction in vehicles associated with 39 fewer homes. Without the realignment of Vineyard Avenue, more residents would be exposed to the increase in noise levels. This is because homes would be built on either side of the existing alignment instead of just one side (buffered by vineyards) as would occur if Vineyard Avenue were realigned adjacent to Arroyo del Valle. However, because the noise level increase would be less than 1 dBA, it would not be noticeable for local residents (noise levels typically need to change by 3 dBA to be noticeable to humans). Minor decreases in noise generated by construction activities and future residents would be experienced by existing on-site and surrounding residents because fewer total houses would be constructed and occupied.

Air Quality

The air quality impacts of this alternative would be slightly increased compared to the proposed project because more vehicle trips would be generated. The traffic discussion provided below identifies in detail the change in the vehicle trips that would be anticipated with this alternative. Because of the relatively small increase in vehicle trips in comparison to the proposed project, the increase in air quality emissions associated with this alternative would be negligible.

Traffic and Circulation

This alternative is expected to generate 57 more vehicular trips during the a.m. peak hour and 38 more trips during the p.m. peak hour than the proposed project. The existing plus approved plus project alternative volumes at the study intersections were analyzed by recalculating the volume-to-capacity ratios and corresponding level of service ratings. Table 5-1 compares peak hour trip generation in the future with development of the alternatives. Table 5-2 summarizes levels of service for the short-term future scenarios (Table 6-1, included in Section 6 of this document, identifies the peak hour intersection levels of service for the General Plan buildout traffic conditions). Detailed level of service calculations are contained in Appendix B.

Under the *Existing Plus Approved Plus 150-Unit Development Alternative* conditions, six of the seven study intersections are expected to operate acceptably at LOS D or better. There would be no difference in the total number of acceptable study intersections compared with the project. This alternative results in a maximum V/C ratio increase of 0.02 over conditions with the proposed project, but does not change levels of service. The unsignalized intersection of Isabel Avenue and Vineyard Avenue would continue to operate at acceptable levels of service.

The intersection of Santa Rita Road and Valley Avenue would operate with a V/C ratio of 0.95, LOS E during the p.m. peak hour. This is a V/C ratio increase of 0.01 over the project, 0.02 over *Existing Plus Approved Development* conditions (V/C=0.93, LOS E) and an increase of 0.15 over *Existing* conditions (V/C=0.81, LOS D). Under short-term future conditions, this intersection would operate unacceptably with or without the development of this alternative. Severe delay and congestion would

be anticipated at the intersection. This impact would be considered significant. However, to mitigate unacceptable levels of service at the intersection of Santa Rita Road and Valley Avenue, the measures described for *Existing Plus Approved Development* Conditions included in Section 4.7 - Transportation/Circulation would need to be implemented by the City. If these measures are implemented, the intersection would operate at LOS D with a V/C ratio of 0.81 during the affected p.m. peak hour; otherwise, this impact would remain significant. The traffic impacts of this alternative would be slightly greater than the proposed project.

**Table 5-1
Project Alternatives Peak Hour Trip Generation**

Scenario	Size	AM Peak Hour					PM Peak Hour				
		Trip Rate	In:Out Ratio	Vehicle Trip Ends			Trip Rate	In:Out Ratio	Vehicle Trip Ends		
				In	Out	Total			In	Out	Total
Proposed Project											
Single-Family	189 homes	0.80	30:70	45	106	151	1.00	70:30	132	57	189
Community Park	1 site	9.00	50:50	5	4	9	18.00	50:50	9	9	18
Elementary School	650 students	0.30	60:40	117	78	195	0.01	50:50	4	3	7
Total				167	188	355			145	69	214
Alternative 1 - No Project Alternative	- -	-	-	-	-	-	-	-	-	-	-
Alternative 2 - 150-Unit Development Alternative											
Single-Family	150 homes	0.80	30:70	36	84	120	1.00	70:30	105	45	150
Inn (Hotel/Motel)	100 rooms	0.80	40:60	32	48	80	0.70	60:40	42	28	70
B&B	10 rooms	0.80	40:60	3	5	8	0.70	60:40	4	3	7
Community Park	1 site	9.00	50:50	5	4	9	18.00	50:50	9	9	18
Elementary School	650 students	0.30	60:40	117	78	195	0.01	50:50	4	3	7
Total				193	219	412			164	88	252
Alternative 3 - 250-Unit Development Alternative											
Single-Family	250 homes	0.80	30:70	60	140	200	1.00	70:30	175	75	250
Community Park	1 site	9.00	50:50	5	4	9	18.00	50:50	9	9	18
Elementary School	650 students	0.30	60:40	117	78	195	0.01	50:50	4	3	7
Total				182	222	404			188	87	275
Alternative 4 - Vineyard Avenue Alignment Alternative											
Single-Family	189 homes	0.80	30:70	45	106	151	1.00	70:30	132	57	189
Community Park	1 site	9.00	50:50	5	4	9	18.00	50:50	9	9	18
Elementary School	650 students	0.30	60:40	117	78	195	0.01	50:50	4	3	7
Total				167	188	355			145	69	214
Source: TJKM 1988											

Table 5-2
Summary of Peak Hour Intersection Levels of Service - Project Alternative Conditions

ID	Intersection Location	Peak Hour	Alternative 1 Existing + Approved		Alternative 2 Existing + Approved + 150-Unit Alternative		Alternative 3 Existing + Approved + 250-Unit Alternative		Alternative 4 Existing + Approved + Project	
			V/C ¹	LOS	V/C ¹	LOS	V/C ¹	LOS	V/C ¹	LOS
329	Santa Rita Road/ Valley Avenue	A.M.	0.84	D	0.85	D	0.85	D	0.85	D
		P.M.	0.93	E	0.95	E	0.95	E	0.94	E
338	First Street/ Ray Street/Vineyard Avenue	A.M.	0.60	A	0.62	B	0.62	B	0.61	B
		P.M.	0.82	D	0.83	D	0.83	D	0.83	D
342	First Street/Sunol Blvd./ Bernal Avenue	A.M.	0.73	C	0.73	C	0.73	C	0.73	C
		P.M.	0.76	C	0.76	C	0.76	C	0.76	C
371	Bernal Avenue/ Stanley Blvd.	A.M.	0.85	D	0.85	D	0.85	D	0.85	D
		P.M.	0.83	D	0.84	D	0.84	D	0.83	D
378	Bernal Avenue/ Vineyard Avenue/Tawny Drive	A.M.	0.49	A	0.52	A	0.51	A	0.51	A
		P.M.	0.54	A	0.55	A	0.55	A	0.55	A
443	Bernal Avenue/ Vineyard Avenue East	A.M.	0.59	A	0.66	B	0.65	B	0.64	B
		P.M.	0.79	C	0.86	D	0.86	D	0.85	D
509	Isabel Avenue/ Vineyard Avenue	A.M.	18.2	C	21.1	D	22.7	D	21.4	D
		P.M.	8.0	B	8.2	B	8.3	B	8.3	B

¹ Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicle for the delayed movements at unsignalized intersections.

Source: TJKM 1998

Public Services and Utilities

The demand for public services and utilities, including police and fire protection services, water supply, wastewater, solid waste generation, and utility services, would not substantially change with this alternative. The demand associated with commercial uses would be greater than with the proposed project; however, a reduced demand created by 39 fewer homes would also result. No substantial differences in the demand for public services and utilities would be anticipated with this alternative.

Public Health and Safety

The public health and safety impacts anticipated with the proposed project would not differ substantially with this alternative. The potential public health concerns of locating residential uses adjacent to agricultural operations could be reduced by fewer homes to be constructed. The public health and safety impacts of this alternative would be less than with the proposed project.

Visual Resources

Fewer areas would be subject to visual change with this alternative than with the proposed project because fewer homes would be constructed. With fewer homes, more flexibility could be achieved in the placement of structures to minimize their visibility from public areas. The visual resource impacts of this alternative would be less than with the proposed project.

Cultural Resources

The potential impacts on cultural resources would be slightly reduced with this alternative. The grading activities anticipated with site development could disturb currently unearthed cultural resources. Because less area would be graded to accommodate the lower number of homes with this alternative, the probability of disturbing cultural resources would be reduced.

CONCLUSION

Some impacts associated with this alternative would be less than those anticipated with the proposed project. However, other impacts, including traffic volumes, vehicle emissions and traffic noise levels, could be higher. On balance, this alternative would be environmentally similar to the proposed project. This determination does not take into consideration other important non-CEQA and non-environmental issues such as fiscal effects and the economic feasibility of this alternative. Based on the fiscal analysis prepared for the project alternatives (Bay Area Economics, December 1997), this alternative would not be fiscally feasible because it would not at the present time nor in the near future provide sufficient funding for the necessary project infrastructure. Therefore, this alternative would not meet the basic project alternatives.

5.4 250-HOME DEVELOPMENT ALTERNATIVE

DESCRIPTION

This alternative assumes development of 250 new residential units. The lots generally west of the landfill (Lots 1-13) are assumed to be developed with residential units at a density of one- to two-units per developable acre, while development on the remaining hillside lots south of Vineyard Avenue (Lots 15-17, 22-27 and 29-31) would have a housing density more related to the physical terrain. Residential development on the lots north of Vineyard Avenue (Lots 18 and 19) would be at a density of three homes per acre, with a vineyard estate on each lot. Lot 21 would have an elementary school and vineyards. Lot 28 would be developed with housing at an overall density of three units per acre, with a vineyard estate lot. Under this alternative, approximately 138 acres would be developed with residential uses, 52 acres would be developed as vineyards, 150 acres would be open space, 12 acres would be developed as school, 20 acres would be developed as a community park, and 12 acres would be developed as public roadway right-of-way. Similar to the proposed project, Vineyard Avenue would be realigned with this alternative.

IMPACTS

Land Use

This alternative would increase the land use density compared with the proposed project. The largest increases in density would occur on lots 18 and 19. The proposed school facility would be moved to Lot 21 in the eastern portion of the site. The change in land use would increase potential land use conflicts between agricultural uses and residential uses and between potential aggregate mining operations and school use. Also, slightly more open space land would be converted to suburban uses with this alternative. The land use impacts of this alternative would be greater than the proposed project.

Earth Resources

This alternative would increase the total area and volume of grading that would be required, therefore increasing anticipated erosion and the downstream transport of sediments. This would be most evident in the steep southern portion of the Plan Area where more homes would increase grading. The earth resource impacts of this alternative would be greater than the proposed project.

Hydrology and Water Quality

This alternative would have greater impermeable surface area compared to the proposed project, thus increasing storm water runoff during major storm events. Water quality degradation associated with development of the property would also be increased with this alternative because of the larger area disturbed and the higher total acreage of urban uses. The hydrology and water quality impacts of this alternative would be greater than the proposed project.

Biological Resources

This alternative would require the removal of larger areas of undeveloped grasslands and oak woodlands than the proposed project. Although the open space buffers identified in the Specific Plan would remain with this alternative, the increase in density in the more sensitive biological area south of Vineyard Avenue would disturb a greater amount of wildlife habitat. The biological resource impacts of this alternative would be greater than the proposed project.

Noise

Minor increases in traffic noise levels would be anticipated on local roadways with this alternative when compared to the proposed project. This increase in noise would be associated with an increase in vehicles generated from the additional residential uses of this alternative. However, because the noise level increase would be less than 1 dBA, it would not be noticeable for local residents (noise levels typically need to change by 3 dBA to be noticeable to humans). No noticeable differences in noise levels would be anticipated with this alternative.

Air Quality

The air quality impacts of this alternative would be increased compared to the proposed project because more vehicle trips would be generated with the proposed additional residential uses. The traffic discussion provided below identifies in detail the change in the vehicle trips that would be anticipated with this alternative. Because of the relatively small increase in vehicle trips in comparison to the proposed project, however, the increase in air quality emissions associated with this alternative would be negligible.

Traffic and Circulation

This alternative is expected to generate 49 more vehicular trips during the a.m. peak hour and 61 more trips during the p.m. peak hour than the proposed project. The existing plus approved plus project alternative volumes at the study intersections were analyzed by recalculating the volume-to-capacity ratios and corresponding level of service ratings. Table 5-1 compares peak hour trip generation in the future with development of the alternatives. Table 5-2 summarizes levels of services for the short-term future scenarios.

Under *Existing Plus Approved Plus 250-Unit Alternative* conditions, all of the seven study intersections are expected to operate acceptably at LOS D or better. This alternative results in a maximum V/C ratio increase of 0.01 over conditions with the proposed project, but does not change levels of service. The unsignalized intersection of Isabel Avenue and Vineyard Avenue would continue to operate at acceptable levels of service.

Public Services and Utilities

This alternative would increase the demand on public services and utilities when compared to the proposed project. The greater number of residential uses would increase the demand for fire and police protection, water supply, waste water, solid waste disposal, electricity and natural gas. However, because the increased demand would be relatively minor (an increase of 61 homes), substantial differences in the public service and utility demands would not be anticipated.

Public Health and Safety

Although this alternative would have a higher density of residential development than the proposed project, no substantial differences would be anticipated in identified public health and safety impacts. The potential public health concerns of locating residential uses adjacent to agricultural operations could be increased slightly by the increased number of homes to be constructed. Similar to the proposed project, this alternative would include the relocation of Vineyard Avenue, thus reducing the potential traffic safety hazard for students accessing the proposed school facility. The public health and safety impacts of this alternative would not differ substantially from those anticipated with the proposed project.

Visual Resources

The visual changes on the project site would be more noticeable with this alternative when compared to the proposed project because a larger number of homes would be constructed. With more homes, less flexibility would be available in the placement of structures on individual lots to minimize their visibility from public areas. The visual resource impacts of this alternative would be greater than the proposed project.

Cultural Resources

The potential impacts on cultural resources would be slightly higher with this alternative. The grading activities anticipated with site development could disturb currently unearthed cultural resources. Because a larger area would be graded to accommodate the higher number of homes with this alternative, the probability of disturbing cultural resources would be increased.

CONCLUSION

This alternative would have somewhat greater impacts than the proposed project in almost all respects. Therefore, this alternative would be environmentally inferior to the proposed project.

5.5 CURRENT VINEYARD AVENUE ALIGNMENT ALTERNATIVE

DESCRIPTION

This alternative would have the same general development pattern as proposed for the Specific Plan but would not relocate Vineyard Avenue (i.e., Lot 33 is not included in this alternative). Lots 18, 19, and 21 would be modified to accommodate development consistent with the existing Vineyard Avenue alignment. Also, instead of a loop roadway system proposed for Lots 1 through 7 and 10 through 12, a cul-de-sac system would be developed with three cul-de-sacs accessing these properties. One of these cul-de-sacs would access through the existing neighborhood west of the project site via Montevino Drive. This cul-de-sac would provide access to four residential lots.

IMPACTS

Land Use

This alternative would generally have the same land use pattern as the proposed project. Minor changes would include the relocation of homes on lots 18, 19, and 21 away from Vineyard Avenue to minimize noise levels at the proposed homes sites and enhance visual quality. No substantial differences in the land use impacts between this alternative and the proposed project would be anticipated.

Earth Resources

This alternative would slightly reduce the earth resource impacts that would be anticipated with the proposed project. Because this alternative would not require the construction of a new roadway adjacent to Arroyo del Valle, less disturbance to soils adjacent to Arroyo del Valle would be anticipated. Significant differences between this alternative and the proposed project, however, would not be anticipated.

Hydrology and Water Quality

This alternative would slightly reduce the hydrology and water quality impacts that would be anticipated with the proposed project. Because this alternative would not require the construction of a new roadway adjacent to Arroyo del Valle, less potential for sediments generated during construction activities to erode into this drainage would be anticipated. Also, the potential for roadway contaminants (i.e., motor oils, antifreeze) to enter Arroyo del Valle would be less with this alternative because the distance between the current Vineyard Avenue alignment and the drainage is greater than with the proposed Specific Plan alignment.

Biological Resources

This alternative would have effects on biological resources that would be similar to the proposed project. Maintaining Vineyard Avenue in its current location would slightly reduce the amount of disturbance anticipated adjacent to Arroyo del Valle. No other substantial differences between this alternative and the proposed project would be anticipated.

Noise

The noise impacts of this alternative would not differ substantially from the proposed project. However, one of the primary noise benefits of the proposed project would be the relocation of Vineyard Avenue away from existing and proposed residential uses. Maintaining the current alignment with this alternative would eliminate this benefit and would concentrate the vehicle traffic noise in the center of the Plan Area rather than along the northern boundary adjacent to Arroyo del Valle. The noise impacts of this alternative would be greater than the proposed project.

Air Quality

The air quality impacts of this alternative would be the same as the proposed project.

Traffic and Circulation

This alternative would have traffic impacts similar to the proposed project. No differences in the generation of vehicle trips would be anticipated. However, this alternative would increase pedestrian hazards for students accessing the proposed school facility. With the proposed project, access to the school by students from within the project site or from residential areas to the east or west, either on

bicycles or walking, would not require the crossing of Vineyard Avenue. The original alignment of Vineyard Avenue would continue to be used as an access route for residents within the project site although portions of this road would be closed to eliminate through traffic. Because very few vehicles would be using the original alignment of Vineyard Avenue, students could safely cross it to access the school site. With this alternative, Vineyard Avenue would remain at its current location and students would be required to cross what will in the future be a heavily traveled roadway. Because the design speed on this roadway is 45 mph, this would be considered a significant safety hazard for students. To reduce this hazard, traffic guards should be employed during school hours to escort students across the street. In addition signs should be posted several hundred feet in either direction of the school alerting drivers to reduce speeds and stop, if necessary, to allow student crossing.

The internal roadway network would be modified with this alternative. Instead of a loop roadway system proposed for Lots 1 through 7 and 10 through 12, a cul-de-sac system would be developed with three cul-de-sacs accessing these properties. One of these cul-de-sacs would provide access to four new residential lots through the existing neighborhood west of the project site via Montevino Drive. Montevino Drive climbs from Vineyard Avenue south until it peaks at the proposed access point for the cul-de-sac at which point it curves toward the west and descends. Because the cul-de-sac access point is located at the peak of Montevino Drive, vehicle speeds at this new intersection are anticipated to be close to the 25 mph posted speed limit. Accident hazards would be assumed to be minimal at this new intersection.

Public Services and Utilities

The demand on public services and utilities would not differ for this alternative when compared to the proposed project.

Public Health and Safety

This alternative would not cause any public health and safety impacts that would differ from the proposed project other than the traffic hazard for students discussed in the traffic section above.

Visual Resources

The visual environment would only change slightly with this alternative when compared to the proposed project. Unlike the proposed project, the alignment of Vineyard Avenue would remain in its current location although the streetscape conditions would be consistent with the proposed project. Because Vineyard Avenue would remain in its current location, the changes in the visual environment would be less noticeable than with the proposed project. The development of homes on lots 18, 19, 21 and 28 would be slightly altered to accommodate access to Vineyard Avenue in its current location however, this change would have little effect on the visual characteristics of the site.

Cultural Resources

The impacts on cultural resources that could occur with the proposed project would not differ substantially with this alternative.

CONCLUSION

This alternative would be environmentally similar to the proposed project. Although some minor reductions in earth resource, water quality and biological resource impacts would be anticipated if Vineyard Avenue is not relocated, a potential increase in safety hazards for students accessing the proposed elementary school would occur.

5.6 ALTERNATIVE LOCATIONS

The concept of an alternative location was considered, but has been rejected because it would fail to meet the most basic of project objectives, which is implementation of the General Plan. The General Plan has specific guidance for the project area. The proposed project is, consequently, specific to the project area. An alternative location would not attain the basic project objectives, and has been rejected by the City from further consideration.

6 CUMULATIVE and GROWTH-INDUCING IMPACTS

6.1 CUMULATIVE IMPACTS OF THE PROPOSED PROJECT

CUMULATIVE DEVELOPMENT

Section 15130 of the State CEQA Guidelines requires that cumulative impacts be analyzed when they are significant. Cumulative impacts are collective effects caused by the combination of several development projects in an area. Pursuant to §15130 of the Guidelines, "(t)he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as much detail as is provided of the effects attributable to the project alone." The proposed project is considered to have a significant cumulative effect if:

- (1) the cumulative effects of development without the project are not significant and the project's additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact;
or
- (2) the cumulative effects of development without the project are already significant and the project contributes considerably to the effect. The term "considerably" is subject to interpretation. The standards used herein to determine considerability are that either the impact must be noticeable to a reasonable person, or must exceed an established threshold of significance. If the cumulative condition would be effectively the same with or without the project, it would not be considered a considerable contribution.

Mitigation measures that reduce the project's contribution to cumulative effects to a less-than-significant level are to be developed where feasible. The Guidelines acknowledge that sometimes the only feasible method for mitigating or avoiding significant cumulative effects is to adopt ordinances or regulations that apply to all projects that contribute to the cumulative effect.

The Guidelines provide two approaches to analyzing cumulative impacts. The first is the list approach, which requires a listing of past, present, and reasonably anticipated future projects producing related or cumulative impacts. The second is the summary approach, wherein a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or areawide conditions is developed. Cumulative impacts analyzed in this EIR are primarily based on the summary approach.

Cumulative Land Use Assumptions

This cumulative impact assessment is based on the land use projections included in the 1996 Pleasanton General Plan. The General Plan identifies a total of 21,180 housing units as of January 1995 that provide housing for approximately 57,347 residents. In the future, the General Plan assumes

Pleasanton will grow to hold approximately 29,000 homes, assuming buildout of all residential lands identified on the General Plan Map. The City's Growth Management Program currently limits annual housing growth to 750 units, or about 1,930 persons. At this rate, Pleasanton would reach a population of about 67,000 by the year 2000 and achieve a buildout population of 74,500 in the Planning Area around the year 2004.

As of 1995, Pleasanton contained about 3,000 businesses that employed about 31,863 full- and part-time workers. Approximately 21% of these workers lived in Pleasanton, another 29% lived elsewhere in the Tri-Valley area, and the remaining 50% commuted from the greater outlying area. Pleasanton is projected to grow to support an employment base of approximately 68,254 workers, assuming buildout of all employment-generating lands identified on the General Plan Map. Employment is expected to grow at an average rate of about 1,520 jobs per year over the next 10 years. At this rate, Pleasanton will reach an employment base of 47,100 by the year 2005. Buildout of all employment uses should occur around 2018.

The General Plan Map designates an Urban Growth Boundary (UGB) line around the edge of land planned for urban development at General Plan buildout. The line distinguishes areas generally suitable for urban development and the provision of urban public facilities and services from areas generally suitable for the long-term protection of natural resources, large lot agricultural and grazing, parks and recreation, public health and safety, subregionally significant wildlands, buffers between communities, and scenic ridgeline views. The UGB is intended to be permanent and to define the line beyond which urban development will not occur.

CUMULATIVE IMPACTS

Land Use, Planning and Public Policies

The population growth anticipated in the Pleasanton area with development of the General Plan land uses would alter the land use patterns within the City by increasing urbanization, expanding the employment base and increasing the population. The General Plan identified specific goals to be achieved with growth in the City, including the implementation of growth management requirements of the Growth Management Program. Development of the Specific Plan would be consistent with the land use goals of the General Plan and would not be expected to result in cumulative land use impacts.

Public Services and Utilities

The project would contribute to a cumulative demand for water that, in combination with other City and area plans, would require augmentation of presently identified water sources for the area. General Plan policies call for contingency planning that includes water conservation, growth management, and planning for supplemental water supply sources. If additional water supplies cannot be secured, or water conservation measures do not result in sufficient water savings, water demands of the proposed project would contribute to demand for water that exceeds secured supplies. This would be considered a significant and unavoidable cumulative impact.

The additional wastewater flows attributed to development under the Specific Plan could contribute to a possible future shortfall of treatment capacity at the Dublin San Ramon Services District (DSRSD) wastewater treatment plant as well as to an impending shortfall of export capacity at the Livermore-Amador Valley Wastewater Management Authority (LAVWMA) facilities. General Plan policies call for securing further sewage capacity for future development. The impact of the proposed project, and the City's General Plan as a whole, is mitigated by steps the City of Pleasanton and other agencies (primarily the DSRSD and the LAVWMA) are taking to provide for expansion of export capacity and/or alternatives that would reduce future capacity requirements. Nevertheless, if additional treatment and export capacity are not achieved, or reductions in water use cannot reduce demand for capacity to an appropriate level, development of the Specific Plan would contribute to excess demand for the available capacity in both systems. These would be considered significant and unavoidable cumulative impacts.

Cumulative development in the City would increase the demand on other public services and utilities including fire and police protection services, school facilities, solid waste, electricity, natural gas, telephone services and park facilities. While development of the Specific Plan would contribute to these increased demands, the Pleasanton General Plan includes specific policies and implementation programs that would require the provision of public services and utilities prior to approving any new developments. The consistent application of these policies and programs would ensure that significant cumulative impacts do not occur for fire and police protection services, school facilities, solid waste, electricity, natural gas, telephone services, and park facilities.

Transportation and Circulation

A detailed analysis of the cumulative traffic conditions was conducted for the EIR, including an assessment of the impacts associated with General Plan buildout and with the proposed project added to the General Plan buildout. The land use conditions and roadway improvements in the buildout conditions are in accordance with the current General Plan. The General Plan buildout scenario, in addition to including approved development, includes transportation projects that are currently under review by the City (either through preliminary discussion or formal application) and remaining projects that are expected with the buildout of the General Plan. As for the analysis of short-term future conditions, the 1996 Pleasanton Traffic Model was used to develop trip generation, distribution, and assignment assumptions for buildout development. A list of buildout developments and their corresponding trip generation are provided within Appendix B. The model assigned these trips to the local street system and added them to existing plus approved traffic volumes.

The analysis of General Plan Buildout conditions assumed additional transportation improvements. Principal features of the transportation network include the addition of a BART station at the Stoneridge Mall, the connection of Stoneridge Drive and Jack London Boulevard between Pleasanton and Livermore, the extension of El Charro Road south to Stanley Boulevard, and the improvement of State Route 84 as a through route in the City of Livermore. The improvement of State Route 84 includes the development of Isabel Parkway, a 6-lane expressway extending north from Vallecitos Road, incorporating Isabel Avenue and forming an interchange with I-580 and then continuing north.

Impacts: General Plan Buildout Without Project - Exhibit 6-1 illustrates the General Plan Buildout traffic volumes at each of the study intersections. The results of the intersection level of service analysis are summarized in Table 6-1. Detailed level of service calculations are contained in Appendix B.

Under *General Plan Buildout (Without Project)* conditions, five of the seven study intersections are expected to operate acceptably at LOS D. The unsignalized intersection of Isabel Avenue and Vineyard Avenue will continue to operate at acceptable levels of service. The conflict between the side street and major street traffic continues to meet Caltrans signal warrants for peak hour volumes.

The following two intersections could operate at unacceptable levels:

Impact
6-1

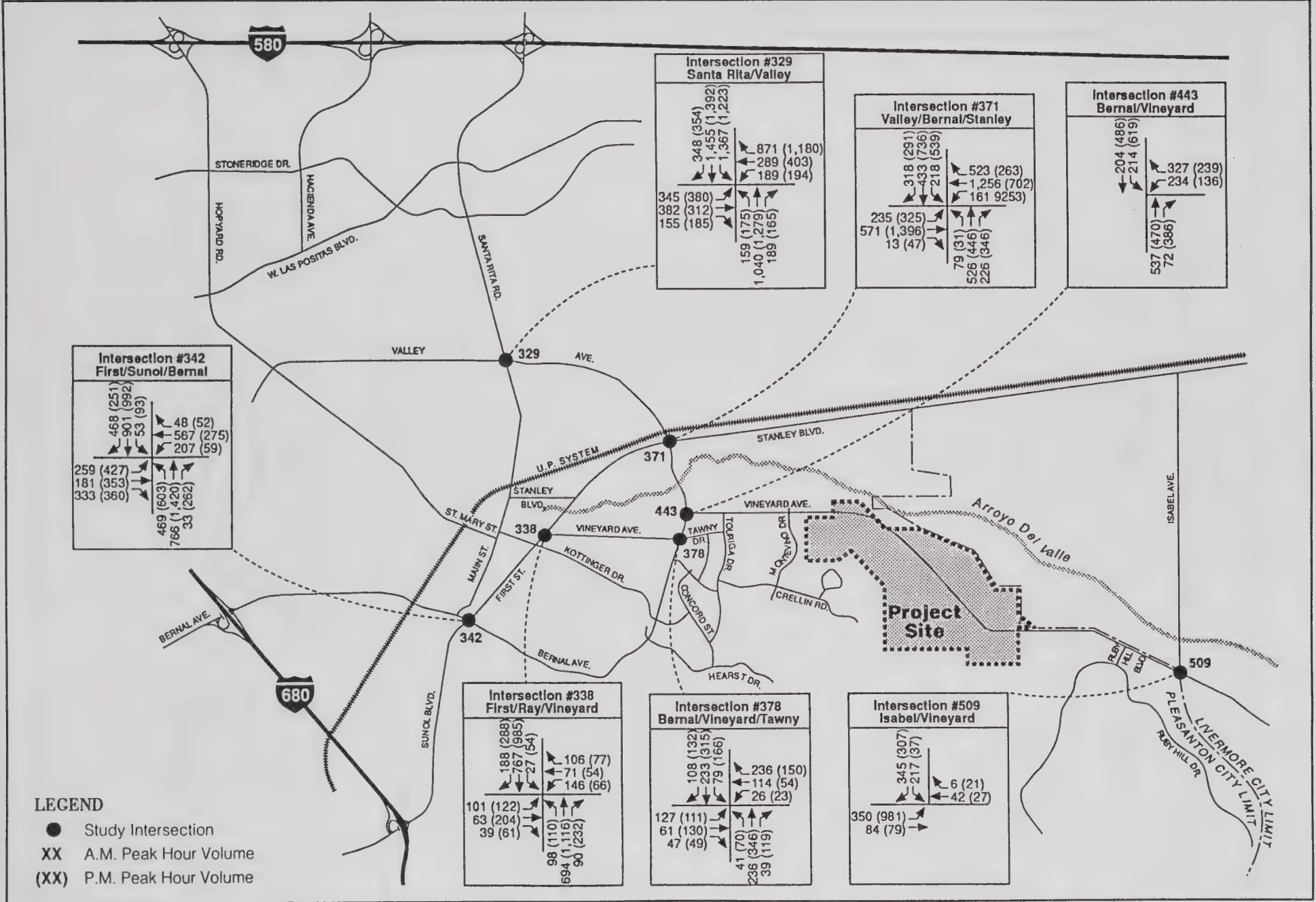
Unacceptable Level of Service: First Street/Ray Street/Vineyard Avenue.
Traffic generated by the buildout of the General Plan without the proposed project (and without mitigation) would result in an unacceptable level of service at the intersection of First Street/Ray Street/Vineyard Avenue. The addition of traffic generated by development of the proposed project would continue to result in an unacceptable level of service at this intersection. Severe delay and congestion would be anticipated. Therefore, this impact would be considered potentially significant.

The First Street/Ray Street/Vineyard Avenue intersection would operate with a V/C ratio of 0.93, LOS E during the p.m. peak hour with buildout of the General Plan, not including the proposed project. Severe delay and congestion would be anticipated at the intersection without any improvements. With the addition of the proposed project, the intersection would continue to operate with a V/C ratio of 0.93, LOS E during the p.m. peak hour identical to *General Plan Buildout (Without Project)* conditions. Similarly, severe delay and congestion would be anticipated to continue at the intersection. This would be considered a potentially significant impact.

Impact
6-2

Unacceptable Level of Service Bernal Avenue/Stanley Boulevard.
Traffic generated by buildout of the General Plan would result in an unacceptable level of service (without mitigation) at the intersection of Bernal Avenue and Stanley Boulevard. The addition of traffic generated by the proposed project to General Plan buildout would continue to result in an unacceptable level of service at this intersection. Severe delay and congestion would be anticipated. Therefore, this impact would be considered potentially significant.

The Bernal Avenue/Stanley Boulevard intersection would operate with a V/C ratio of 0.93, LOS E during the p.m. peak hour in association with buildout of the General Plan. Severe delays and congestion would be anticipated at the intersection without any mitigation. With development of the proposed project, the intersection would continue to operate with a V/C ratio of 0.93, LOS E during the p.m. peak hour, identical to *General Plan Buildout (Without Project)* conditions. Severe delays and congestion would be anticipated to continue. Therefore, this impact would be considered potentially significant.



Source: TJKM, 1998.

General Plan Buildout (Without Project) Traffic Volumes

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 9/98

EXHIBIT 6-1

NOT TO SCALE

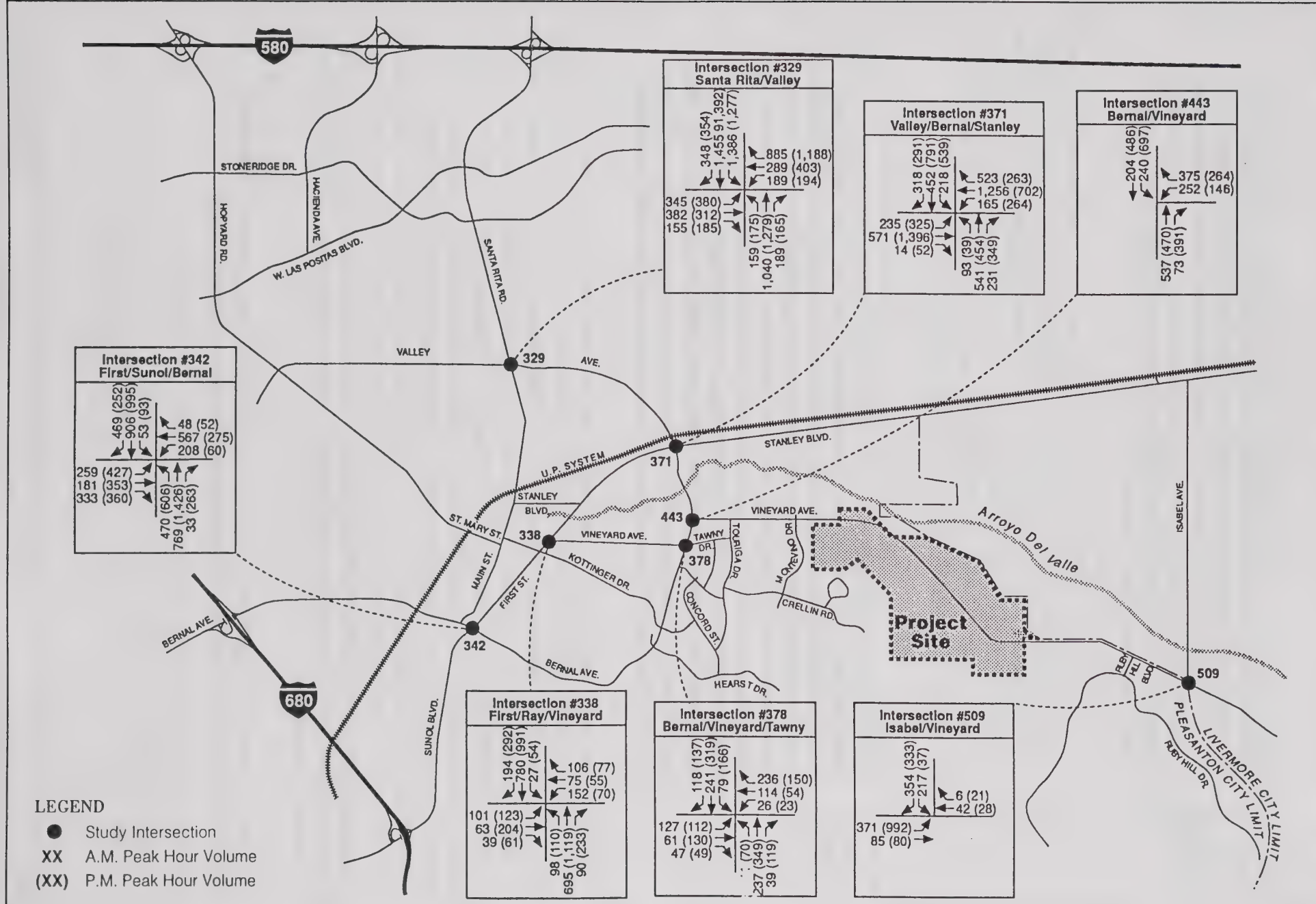


EDAW

Table 6-1
Peak Hour Intersection Levels of Service - General Plan Buildout Conditions

ID	Intersection Location	Intersection Control	Peak Hour	Alternative 1 Without Project		Alternative 2 150 Units		Alternative 3 250 Units		Alternative 4 Proposed Project	
				V/C ¹	LOS	V/C	LOS	V/C	LOS	V/C	LOS
329	Santa Rita Road/ Valley Avenue	Signalized	AM PM	0.90 0.89	D D	0.90 0.89	D D	0.90 0.89	D D	0.90 0.89	D D
338	First Street Ray Street/ Vineyard Avenue	Signalized	AM PM	0.77 0.93	C E	0.79 0.93	C E	0.79 0.93	C E	0.78 0.93	C E
342	First Street/ Sunol Boulevard/ Bernal Avenue	Signalized	AM PM	0.89 0.87	D D	0.89 0.87	D D	0.89 0.87	D D	0.89 0.87	D D
371	Bernal Avenue/ Stanley Blvd.	Signalized	AM PM	0.86 0.93	D E	0.87 0.94	D E	0.87 0.94	D E	0.86 0.93	D E
378	Bernal Avenue/ Vineyard Avenue/ Tawny Drive	Signalized ²	AM PM	0.50 0.54	A A	0.52 0.54	A A	0.52 0.54	A A	0.51 0.54	A A
443	Bernal Avenue/ Vineyard Avenue East	Signalized ²	AM PM	0.69 0.85	B D	0.77 0.89	C D	0.75 0.89	C D	0.74 0.88	C D
509	Isabel Avenue/ Vineyard Avenue	One-Way STOP	AM PM	28.4 14.8	D C	33.6 16.9	E C	36.2 18.0	E C	34.0 16.9	E C
¹ Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicle for the delayed movements at unsignalized intersections. ² Intersection is currently unsignalized but is planned for eventual signalization. To ensure a consistent comparison with future scenarios, signalization is assumed.											
Source: TJKM 1998											

Forecasted traffic volumes for *General Plan Buildout with Project* conditions are illustrated in Exhibit 6-2. The levels of service for each of the study intersections are summarized in Table 6-1. Detailed level of service calculations are contained in Appendix B. Under *General Plan Buildout with Project* conditions, three of the seven study intersections are expected to operate acceptably at LOS D. There would be no difference in acceptable and unacceptable study intersections from *General Plan Buildout (No Project)* conditions except for the Isabel Avenue/Vineyard Avenue intersection.



Source: TJKM, 1998.

General Plan Buildout With Project Traffic Volumes

VINEYARD AVENUE CORRIDOR SPECIFIC PLAN

JN 85002.01 6/98

EXHIBIT 6-2

NOT TO SCALE



EDAW

Impact
6-3

Degradation to Unacceptable Level of Service: Isabel Avenue/Vineyard Avenue. Traffic generated by the development of the proposed project would degrade levels of service (without mitigation) at the unsignalized intersection of Isabel Avenue and Vineyard Avenue. Severe delay and congestion would be anticipated at the intersection. This impact would be considered potentially significant.

The intersection of Isabel Avenue and Vineyard Avenue located in the City of Livermore would operate with an average delay of 34.0 seconds per vehicle, LOS E for affected movements during the a.m. peak hour. This is a delay increase of 5.6 seconds over *General Plan Buildout (Without Project)* conditions (Delay = 28.4 seconds, LOS D). Caltrans signal warrants for peak hour volumes would continue to be met as under previous study scenarios, meaning a signal would be justified if so desired by the City of Livermore. This would be considered a potentially significant impact.

Impact
6-4

Freeway Traffic Operations. Trips generated by the proposed project, when combined with the cumulative development planned in the region, would contribute to unacceptable traffic operations on segments of Interstates 580 (I-580) and 680 (I-680). Improvements to and standards for both I-580 and I-680 are included in the Tri-Valley Transportation Plan (TVTP). Because the TVTP does not provide adequate capacity to satisfy fully all future transportation demand at its established service standards, cumulative impacts on the regional transportation system would be anticipated. The development of the proposed project would contribute to that cumulative impact. This would be considered a significant and unavoidable impact.

Transportation impact fees paid by development in the Plan Area would contribute to financing improvements included in the TVTP. The Tri-Valley Transportation Council (TVTC) fees provide funding for a west BART station and express lanes. Other funding for TVTP-identified improvements may also be available by way of the proposed Measure “B” extension and the Regional Gas Tax. For example, additional funding for I-680 south, included in the STIP, would result in the addition of high occupancy vehicle (HOV) lanes and facilities for corridor ramp metering. Construction of I-680 improvements is scheduled to begin in the winter of 1998 or spring of 1999, earlier than they could be accomplished if wholly reliant on TVTP funds (for which the spending priority is the I-580 flyover). The TVTC fees have been committed by the seven participating jurisdictions. Fees imposed under the joint powers agreement are not expected to fully provide for meeting the TVTP capital needs. Therefore, a significant and unavoidable cumulative traffic operations impact on segments of I-580 and I-680 would be anticipated.

Mitigation Measures - Mitigation measures for General Plan Buildout conditions are described below. Levels of service after implementation of the mitigation measures are summarized in Table 6-2.

Table 6-2 Peak Hour Intersection Levels of Service - Mitigated General Plan Buildout Conditions							
ID	Intersection Location	Intersection Control	Peak Hour	Without Project		Proposed Project	
				V/C ¹	LOS	V/C ¹	LOS
338	First Street/Ray Street/Vineyard Avenue	Signalized	AM PM	0.55 0.70	A B	0.56 0.70	A B
371	Bernal Avenue/ Stanley Boulevard	Signalized	AM PM	0.86 0.86	D D	0.86 0.96	D D
509	Isabel Avenue/ Vineyard Avenue	One-Way STOP	AM PM			8.7 9.8	B B
¹ Volume-to-capacity (V/C) ratio for signalized intersections, average delay in seconds/vehicle for the delayed movements at unsignalized intersections.							
Source: TJKM 1998							

impact
6-1
mitigation

Unacceptable Level of Service: First Street/Ray Street/Vineyard Avenue

To mitigate unacceptable levels of service at the intersection of First Street/Ray Avenue/Vineyard Avenue, the following measures should be implemented with the buildout of the General Plan:

- ▶ Add a second through-lane on the southbound First Street approach.
- ▶ Add a second through-lane on the northbound First Street approach.

Mitigation would improve this intersection to V/C ratio 0.70, LOS B, during the impacted p.m. peak hour. These mitigation measures are planned by the City and funds are available.

impact
6-2
mitigation

Unacceptable Level of Service: Bernal Avenue/Stanley Boulevard

To mitigate an unacceptable level of service at the intersection of Bernal Avenue/Stanley Boulevard, the following measure should be implemented with the buildout of the General Plan:

- ▶ Add a third through-lane on the eastbound Stanley Boulevard approach.

This mitigation would improve this intersection to V/C ratio 0.86, LOS D, during the impacted p.m. peak hour and sufficiently mitigate an unacceptable level of service. This mitigation measure is planned by the City, but the City does not yet have an identified funding source.

Unacceptable Level of Service: Isabel Avenue/Vineyard Avenue

To mitigate an unacceptable level of service at the unsignalized intersection of Isabel Avenue/Vineyard Avenue the following measure should be implemented with the buildout of the General Plan and construction of the proposed project:

Add a second lane on the southbound Isabel Avenue Approach. This lane would function as an exclusive right-turn lane.

With mitigation, the intersection would operate at LOS B with an average delay of 8.7 seconds for the delayed movements during the impacted a.m. peak hour. This improvement is anticipated to be implemented when Isabel Avenue is widened to 4 lanes as part of the Measure B transportation projects.

Freeway Traffic Operations.

Project developers would be responsible for paying a pro-rata share of traffic improvements identified in the Tri-Valley Transportation Plan and the City Traffic Development Fee.

Following implementation of the above mitigation measures, all project impacts on transportation facilities would be reduced to less than significant except for freeway traffic operations. These impacts would remain significant and unavoidable.

Air Quality

The General Plan states that the largest increase in regional emissions related to buildout would be from automobile traffic. The increase in total daily vehicle miles traveled was estimated at 28% for a total of 4,512,278 miles in the year 2010 compared to 3,525,203 for 1995. Emissions associated with these additional vehicle miles are also estimated. In 2010, hydrocarbon emissions from automobile traffic are expected to be approximately 63% below current levels, while emissions of oxides of nitrogen are expected to be about 27% below current levels. Particulate emissions are expected to increase by 15% although no exceedances of the State or Federal standards would be expected. This is because auto traffic is responsible for only about 6% of the particulate emissions in Alameda County. Auto-related carbon monoxide emissions are expected to be 58% below current levels. The general decrease in auto-related emissions is based on a more efficient auto fleet mix that would include advancing technologies that would minimize emissions. The proposed project would contribute to these emissions but would not be expected, on a cumulative basis, to contribute to any exceedances of State or Federal air quality standards.

Point source emissions, generated from such uses as gravel harvesting operations and industrial facilities, would be expected to increase with General Plan buildout. Although the number and nature of future additional air pollutant point sources within Pleasanton are not known, each individual source will be required to meet the rules and regulations of the Bay Area Air Quality Management District (BAAQMD). These regulations require that sources of hazardous materials or criteria pollutants above

certain thresholds obtain permits prior to construction or operation of the facility. BAAQMD regulations may require the use of Best Available Control Technology, emission reductions at other locations to offset proposed increases, and detailed analysis and/or modeling of air pollution impacts prior to issuing a permit. The proposed project is not anticipated to contribute on a cumulative basis to point source emissions.

Noise

The General Plan identified future traffic noise levels, using traffic volumes estimated at buildout conditions. In general, noise levels are projected to increase to varying degrees. One of the potentially significant future noise impacts occurs in existing neighborhoods where sound wall installation is infeasible due to front yard orientations. This occurs along frontage roads adjoining major thoroughfares (e.g., Hopyard Road south of Valley Avenue and Santa Rita Road south of Francisco Street) and along “parkway” streets (e.g., West Las Positas Boulevard in Fairlands and Del Valle Parkway). Relief for these neighborhoods will require creative solutions where feasible and attention to minimizing traffic increases so that front yard noise levels remain below City standards. The proposed project would contribute, on a cumulative basis, to the increase in vehicle noise along local roads, although because of the relatively small size of the proposed project, significant contributions would not be anticipated.

Visual Resources/Aesthetics

The cumulative development associated with buildout of the General Plan would be expected to alter the visual character of Pleasanton by introducing more urban uses. However, because the intent of the Specific Plan is to provide for a well designed residential neighborhood that integrates the wine country characteristics of the Livermore Valley into the southeastern portion of Pleasanton, the site specific visual changes would be considered to be positive. Development of the proposed project would not be expected to contribute to adverse cumulative impacts in the region.

Biology

Buildout of the General Plan would be expected to cause biological impacts through the reduction in habitat for a variety of species. However, because the proposed project provides mitigation for the loss of habitat within the Specific Plan Area, its development would not be expected to contribute substantially to significant cumulative impacts.

Geology and Soils

Due to the nature of earth resources, adverse impacts are site-specific and not generally affected by cumulative development in the region. Impacts would need to be determined on a project-by-project basis. Development of the proposed project would not be expected to contribute to cumulative earth resource impacts.

Water

The project would contribute to a cumulative demand for water that, in combination with other City and area plans, would require augmentation of existing water sources identified for the area. General Plan policies require contingency planning including water conservation, growth management, and planning for supplemental water supply sources. If additional water supplies cannot be secured, or water conservation measures do not result in sufficient water savings, water demands of the additional residential development permitted by the Specific Plan would contribute to demand for water in excess of secured supplies. This would be considered a significant and unavoidable impact.

Wastewater

The additional wastewater flows attributed to development under the Specific Plan could contribute to a possible future shortfall of treatment capacity at the DSRSD wastewater treatment plant as well as to an impending shortfall of export capacity at the LAVWMA facilities. General Plan policies require securing further sewage capacity for development called for in the Plan. The impact of the project, and the City's General Plan as a whole, is mitigated by the steps the City of Pleasanton and other agencies (primarily the DSRSD and LAVWMA) are taking to provide for expansion of export capacity and/or alternatives that would reduce future capacity requirements. Nevertheless, if additional treatment and export capacity are not achieved, or reductions in water use cannot reduce demand for capacity to an appropriate level, future development along the Vineyard Avenue Corridor would contribute to excess demand for available capacity in both systems. This would be considered a significant and unavoidable impact.

Hydrology

Cumulative development in the City would increase the demand for storm water management during large storm events. The proposed project includes infrastructure intended to accommodate development of the site as proposed. Cumulative development would also be required to provide appropriate infrastructure to accommodate storm water runoff. Implementation of the Growth Management policies of the General Plan would be expected to ensure cumulative hydrology impacts do not become significant. Because adequate infrastructure would be provided for the proposed project, it would not be expected to contribute significantly to cumulative hydrology impacts.

Cultural Resources

Due to the nature of cultural resources, adverse impacts are site-specific and not generally affected by cumulative development in the region. Impacts would need to be determined on a project-by-project basis. Development of the proposed project would not be expected to contribute to cumulative cultural resource impacts.

6.2 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

Section 15126(g) of the State CEQA Guidelines specifies that the growth-inducing impacts of a project must be addressed in the environmental impact report. A project is regarded as growth inducing if it causes substantial growth in the local population and employment base, with a corresponding growth in the demand for housing [as defined in CEQA, Chapter 13, Article 11, §15126(g)]. Included in the definition are projects that would remove obstacles to population growth. Examples of growth-inducing actions include developing service areas from previously unserved areas, extending transportation routes into previously undeveloped areas, and establishing major new employment opportunities.

Although growth within the Specific Plan Area would be accommodated by the proposed extension of infrastructure, that growth has long been envisioned by the City of Pleasanton General Plan and no capacity in the infrastructure systems would be provided for growth outside of the Specific Plan Area. With residential subdivisions surrounding the project site on two sides and the Arroyo del Valle to the north and open space beyond the Urban Growth Boundary to the south, development of the project site would be considered infill. As such, the extension of services to this area would not constitute leap-frog development and would not encourage growth on adjacent lands. No unplanned growth is anticipated with development of the project site and no growth-inducing impacts would be expected.

6.3 SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY

The project site has historically included a mix of agricultural and rural residential uses. The Specific Plan would permit this area to be converted to more suburban uses that would combine agricultural operations with residential housing, an elementary school, a park and potential commercial development. This conversion is anticipated in the Pleasanton General Plan, which guides the long-term use of land in the City of Pleasanton. The integration of agricultural operations into a suburban community would allow the continued long-term productivity of the site's agricultural lands while allowing the productive use of the property to fulfill the City's housing, school and park needs.

6.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Site development would involve the consumption of non-renewable energy resources (electricity, natural gas, gasoline, and other fuels) and the commitment of materials such as concrete, wood, plastics and metal during project construction and operation. Other impacts, such as the development of suburban uses in areas that have historically been used for agricultural purposes, would be irreversible. However, the Specific Plan encourages the integration of agricultural operations into the residential fabric of the project site. None of these changes constitutes a significant adverse impact as defined by CEQA.

7 REPORT PREPARATION

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8 REFERENCES and PERSONAL COMMUNICATIONS

8.1 REFERENCES

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8.2 PERSONAL COMMUNICATIONS

Bean, Caitlin. Biologist, California Department of Fish and Game. Personal communication, telephone interview with Leo Edson of EDAW, May 29, 1998.

Carlson, Eric. Fire Marshal, Livermore-Pleasanton Fire Department. Personal Communication with M. Halajian of EDAW, June 1998.

Cusenza, Steve. Utility Planning Manager, City of Pleasanton Public Works Department. Personal conversation with M. Halajian of EDAW, June 3, 1998.

Gary, Stewart. Fire Chief, Livermore-Pleasanton Fire Department. Personal Communication with M. Halajian of EDAW, May 1998.

O'Dea, Kevin. Geologist, Baseline Engineering. Personal communication with Cindy Davis of EDAW, March 23, 1998.

Little, John. Biologist, Sycamore Environmental Consultants. Personal communication, telephone interview with Leo Edson of EDAW, May 29, 1998.

Plucker, Greg. Associate Planner, City of Pleasanton. Personal communication with Kurt Legleiter of EDAW, June 3, 1998.

Marcelo, R. Pacific Gas and Electric, Mapping Department. Personal communication with Kevin O'Dea, BASELINE, March 12, 1998.

Nemeth, Phil. Architect, HMC. Personal communication with K. Legleiter of EDAW, June 4, 1998.

Wolfe, James. Director of Parks and Community Services, City of Pleasanton. Personal communication with M. Halajian of EDAW, May, 1998.

appendix A

Notice of Preparation and Comments

VINEYARD CORRIDOR SPECIFIC PLAN EIR
March 16, 1998
Scoping Meeting Summary

General

- 1) Site specific impact analysis needs to be provided in the EIR.

Land Use Conflicts

- 1) Homes constructed on the hill on Lot 12 would look down on the existing homes located to the south, therefore reducing privacy. A resident located to the south suggested appropriately placed landscaping to limit views of existing homes. Residents are also concerned about hillside stability, preservation of oak trees in this area, and increased discharge during storm events.
- 2) Prime agricultural lands need to be mapped in the EIR; approximately 150 acres occur on the site.
- 3) The vineyards are most feasible when planted in contiguous locations, because the need for buffer areas is minimized.
- 4) The Alameda County agricultural fee program included in the South Livermore Plan needs to be discussed in the EIR.
- 5) Would restrictions on farm animals be included in the specific plan for smaller parcels?
- 6) A wildland urban interface plan needs to be included in the specific plan to address the effect of introducing people into the wildland areas and including a discussion of safety issues associated with increased fire hazards and trespassing.
- 7) How will the dedication of open space be fairly distributed among the parcels?
- 8) The spraying required for new vineyard areas may not be compatible with the school facility and residential uses. How will pesticide management versus sensitive land uses be balanced?
- 9) How will the project fit into the Pleasanton Growth Management Plan?

School Siting Issues

- 1) The school site would attract students from outside of the project area, increasing traffic and noise.
- 2) The school could be located further to the northwest to allow residential development to occur in the quieter location currently identified for the school.
- 3) Parents transporting students to the school site would increase local traffic volumes.
- 4) The school should be constructed prior to construction on the remainder of the site.

Park Site Uses

- 1) The use of the old landfill site for park uses may not be appropriate for a variety of reasons.
- 2) Existing homes located south of the proposed park site could be adversely affected by park activities including noise generated by active uses (e.g., ballfields, tennis courts, etc), crime associated with easier access to existing properties, the creation of an attractive nuisance for teenagers, and reduced serenity for residents.
- 3) If the park is watered, increased leachate generation from the old landfill could occur, potentially contaminating groundwater and surface water resources downstream.
- 4) Ruby Hill kids could use the proposed park site and other parks in the City although the Ruby Hill residents have not contributed to park financing.

Biology

- 1) Biological issues that need to be addressed include the Alameda whip snake, San Joaquin kit fox, California tiger salamanders, red-tailed hawks, and the three drainages on the site.
- 2) How will bird migration be affected by the proposed project?
- 3) How would existing wetlands be affected by the realignment of Vineyard Avenue?

Hydrology

- 1) Drainage currently flows across the location of the proposed school site. How will this drainage be diverted and what are some alternative drainage alignments.
- 2) Based on the flooding of Vineyard Avenue in 1983, how would the project affect localized flooding?

Visual Resources

- 1) The development of high-end housing at a density of 3 units per acre would create a large mass that would alter the visual environment.
- 2) Vineyard Avenue should be landscaped to maintain the rural atmosphere of the project area.
- 3) Lighting should be subdued, with street lighting in the hills eliminated entirely. The lighting for the school could be a serious problem.

Traffic

- 1) The project would increase congestion at the Vineyard Avenue/Bernal intersection.
- 2) A secondary access should be provided to the site to minimize traffic impacts.
- 3) Traffic on Bernal and Vineyard Avenue will increase with project development. When will Bernal be expanded to four lanes to accommodate this increase in traffic and what areas of Bernal will be expanded?
- 4) Would traffic speeds increase on Vineyard Avenue if it is straightened?
- 5) The realignment of Vineyard Avenue would minimize traffic hazards for kids walking to the school site, which would be a benefit of the project.

Noise

- 1) The noise levels from the quarries is higher in the hills than in the flat lands. This needs to be accounted for in the noise analysis.

Utilities

- 1) Would a water tank be required for site development?
- 2) How would sewage be provided to the site?

Trails

- 1) How would trails be integrated into the specific plan?
- 2) The original CC&Rs for the existing homes required trails to be provided around every home, this has not occurred.

Recommended Alternatives

- 1) Relocate the school site to the western portion of the Hahner property.
- 2) Maintain the landfill property as open space with no active park, and the park would be located adjacent to the school site.



State of California

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO 95814

PETE WILSON
GOVERNOR

PAUL F MINER
DIRECTOR

RECEIVED
MAR 13 1998
CITY OF PLEASANTON
PLANNING DEPT.

DATE: March 3, 1998
TO: Reviewing Agencies
RE: GPA, REZONE OF THE 368-ACRE VINEYARD AVE. CORRIDOR AREA
SCH# 98031009

Attached for your comment is the Notice of Preparation for the GPA, REZONE OF THE 368-ACRE VINEYARD AVE. CORRIDOR AREA draft Environmental Impact Report (EIR).

Responsible agencies must transmit their concerns and comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

WAYNE RASMUSSEN
CITY OF PLEASANTON, DEPT. OF PLANNING & DEVELOPMENT
200 OLD BERNAL AVE.
PO BOX 520
PLEASANTON, CA 94566-0602

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call at (916) 445-0613.

Sincerely,

ANTERO A. RIVASPLATA
Chief, State Clearinghouse

Attachments

cc: Lead Agency

NOP Distribution List

S = sent by lead agency

X = sent by SCH

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- ☐ Martha Sullivan
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- ☒ Betty Silva
State Lands Commission
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- ☐ Gerald R. Zimmerman
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POLICE
4833 BERNAL AVE.
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484-8127

February 18, 1998

**Subject: Notice of Preparation of a Draft Environmental Impact Report
for the Vineyard Avenue Corridor Specific Plan**

Lead Agency: City of Pleasanton, Department of Planning and
Community Development
Street Address: 200 Old Bernal Avenue, P.O. Box 520
Pleasanton, California 94566-0802
Contact: Wayne Rasmussen, Principal Planner

The City of Pleasanton Department of Planning and Community Development will be the Lead Agency and will prepare a Draft Environmental Impact Report (DEIR) for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the project.

A detailed project description and the potential environmental effects are presented in the attached Initial Study.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date *but not later than* 30 days after receipt of this notice.

Please send your response to Wayne Rasmussen, Principal Planner, at the address shown above. We will also need the name of the contact person in your agency.

Project Title: GPA-97-02, SP-97-02, RZ-98-02, General Plan amendment, specific plan, and rezoning of the 368-acre Vineyard Avenue Corridor Area.

Project Location: In Pleasanton, California on both sides of Vineyard Avenue starting at approximately 200 feet east of Montevino Drive and extending in an easterly direction (please refer to the location map in the Initial Study).

Project Description:

General Plan Amendment to permit: (1) a modification of the General Plan Map from its present "Specific Plan Area" designation to a combination of the following land use designations: Agriculture and Grazing, Public Health and Safety, Low Density Residential, Medium Density Residential, Public and Institutional (elementary school), Parks and Recreation (Community Park), and Commercial; (2) a realignment of Vineyard Avenue on the General Plan Map to an area north of its present location and; (3) a General Plan text amendment regarding the description of the Vineyard Avenue Corridor area.

Specific Plan to permit: (1) the development of vineyards, approximately 189 new single-family homes, an elementary school, a 20-acre community park, possible commercial uses (100 room inn/spa/restaurant/conference facility, and bed and breakfast inn), and preservation of open space lands; (2) a realignment of Vineyard Avenue to an area north of its present location; and (3) an extension of City water and sanitary sewer service and other public services.

Rezoning to a series of Planned Unit Development zoning districts to permit the proposed project.

In addition, an "EIR scoping meeting" has been scheduled for March 16, 1998, 7:00 p.m., in the Pleasanton City Council Chambers, 200 Old Bernal Avenue. The purpose of the meeting is to provide an opportunity for interested persons to discuss the EIR process with City staff and consultants and to provide oral comments on items which should be addressed in the EIR. You are urged to attend and provide your comments.

Date February 18, 1998

Signature

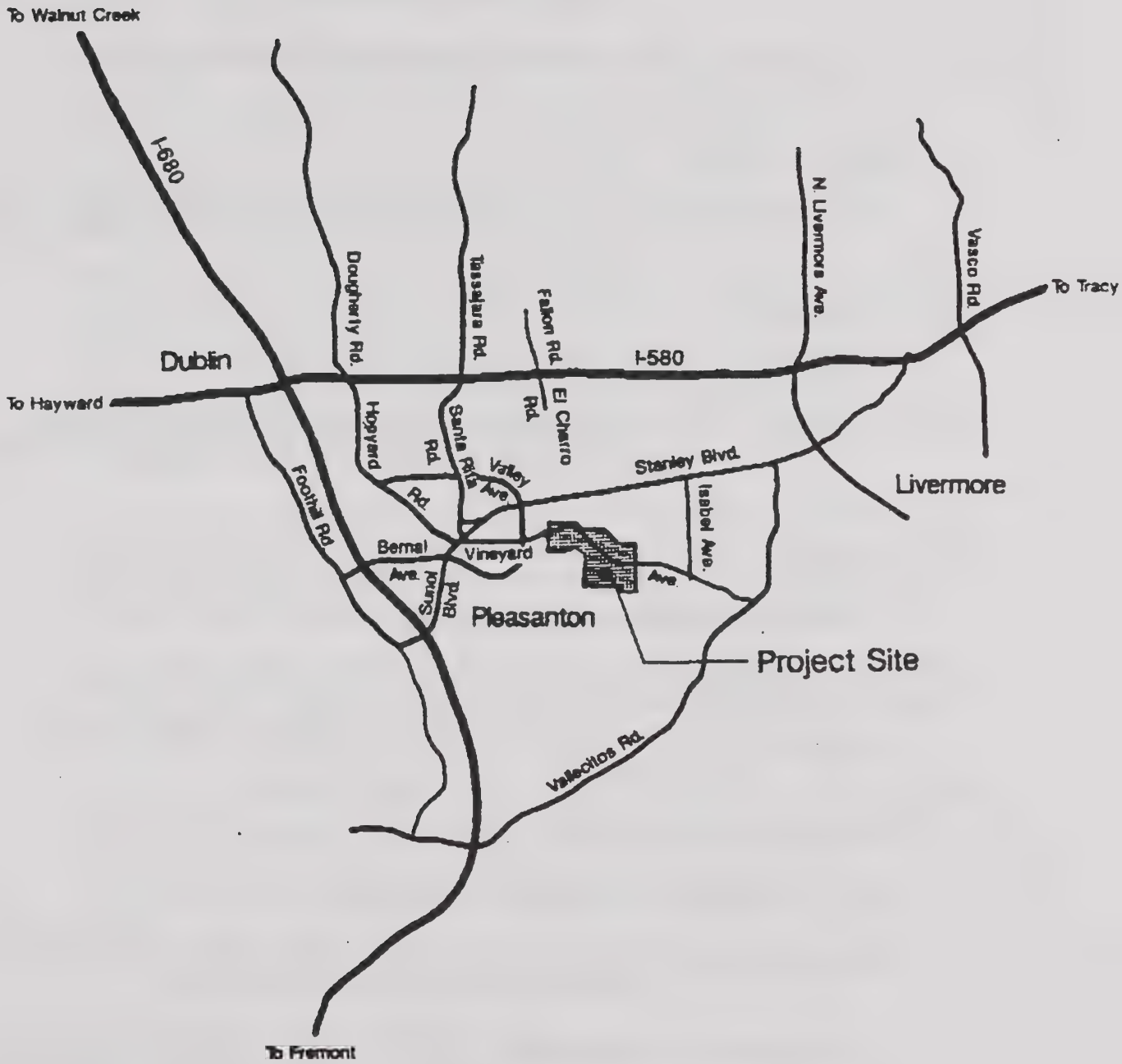

Wayne Rasmussen

Title

Principal Planner

Telephone

(510) 484-8158



approx. scale 1"=10,000'

**Regional
Map**



Vineyard Avenue Corridor
City Of Pleasanton

CITY OF PLEASANTON

INITIAL STUDY - ENVIRONMENTAL CHECKLIST FORM

I. BACKGROUND

1. Name of Proposal: GP-97-02, SP-97-02, and RZ-98-02, Vineyard Avenue Corridor General Plan Amendment, Specific Plan, and PUD Rezoning
2. Proponent: City of Pleasanton
3. Contact Person: Wayne Rasmussen, Principal Planner
4. Address: City of Pleasanton Department of Planning and Community Development, 200 Old Bernal Avenue, P.O. Box 520, Pleasanton, CA 94566-0802
5. Phone: (510) 484-8158
6. Date Checklist Submitted: February 12, 1998
7. Person Preparing Checklist: Wayne Rasmussen, Principal Planner

Location: Vineyard Avenue in eastern Pleasanton, California. See vicinity map on following page.

Area: Approximately 368 acres.

Existing Land Uses: Rural residential and agriculture.

Proposed Land Uses: Agriculture, single-family residential, community park, elementary school, possible commercial, and open space.

Current General Plan Designations: "Specific Plan Area" consisting of Agriculture and Grazing; Low and Medium Density Residential; Parks and Recreation; Commercial; and Public Health and Safety.

II. PROJECT DESCRIPTION

The Vineyard Avenue Corridor land use concept assumes the development of approximately 189 new homes (in addition to 20 existing homes), plus limited additional housing needed to help finance the property owners' share of realigning Vineyard Avenue. The final figure may increase or decrease somewhat based upon housing marketability and a detailed infrastructure cost breakdown which will be analyzed by the project's economic consultant following preparation of the draft Specific Plan.

Parcels 1-12 located west of Parcel 13 (old landfill site) and three acres of the northern portion of Parcel 13 are planned to be developed with homes at a density of one to two units per acre. The remaining portion of Parcel 13 is to be developed with a 20-acre active community park. Development on the other hillside parcels located south of Vineyard Avenue (Parcels 14-16, 21-26, 28, and 29) are to have homes at an overall density of one unit per three acres. Homes are to be clustered on Parcels 21-26, 28, and 29 in order to preserve substantial areas of surrounding open space.

Development of the parcels north of Vineyard Avenue (Parcels 17, 18, and 20) includes three homes per acre and a vineyard estate lot of approximately 21 acres on each parcel. Parcel 19 is a 0.8-acre single home site which is not planned to change. Six acres each on Parcels 17 and 18 are also planned for development as a 12-acre elementary school.

Parcel 27 has the option of either developing with housing at a density of three units per acre and a 15-acre vineyard estate lot, or a 100-room inn/spa/restaurant/conference facility and a vineyard estate lot.

In addition, small bed-and-breakfast inns are to be conditionally permitted on Parcels 17, 18, and 20-27 in place of a proportionate (to be defined) number of housing units.

Vineyard Avenue is to be realigned to a location which generally parallels the Arroyo del Valle.

III. ENVIRONMENTAL EFFECTS

1. Conformance of Proposal with General Plan Policies.

The proposed project would require amendments to the existing General Plan Map and text in order to establish a Specific Plan as required by the General Plan for this area. The EIR will address any potential policy consistency issues. However, at this time, the proposed land use/infrastructure concept is believed to be consistent with the General Plan.

<u> </u>	<u> X </u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

2. Impact on Existing Uses (On and Off Site)

On-Site Land Use. The site is currently used for agriculture and rural residential purposes. Existing agriculture and open space land would be reduced in area and partially replaced with suburban uses. Primary impacts on existing uses would relate to the future park and school activities, traffic, and noise.

Off-Site Land Use. Open space areas used for cattle grazing exist to the south, which present potential agricultural/urban compatibility issues. The RMC Lonestar gravel quarry is located to the northeast, with potential noise, visual, and other compatibility issues. Single family residential uses are located immediately west of the site and are considered to be compatible with the proposed project uses.

<u> X </u>	<u> </u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

3. Geologic Impacts (Hazards, Change in Topography, Erosion, etc.)

Topography. Sections of the site located south of Vineyard Avenue contain both rolling foothills and steep slopes. More than two-thirds of the site ranges between ten and forty percent in grade.

Grading. The project would result in some changes in topography, particularly in the area proposed for residential development south of Vineyard Avenue. Grading would be necessary throughout the site to accommodate individual lot development and public improvements (streets, utilities, etc.).

Seismic Concerns. The site is not located within an Alquist-Priolo Fault Zone, although it is in a region which is likely to experience strong seismic shaking in the future.

Landslides. Preliminary geologic investigation of the site has identified a number of minor landslides.

Other Geologic/Soils Concerns. The site contains expansive soils, erosion-prone soils, and alluvium which may be subject to liquefaction.

<u>X</u>		
May be	Insignificant	Insignificant
Significant		if Mitigated

4. Air Quality Impacts (Emissions, Odors, Change in Microclimate)

Emissions. Proposed development would result in minor increases in emissions due to building heating/cooling and vehicular use. In addition, there would be temporary increases in dust and other emissions during the construction phase of site development. All grading and construction activity would be subject to City standard dust control measures to reduce potential conflicts with nearby residential properties. The vineyard fertilizers and pesticides could present public health and safety issues unless properly controlled.

<u>X</u>		
May be	Insignificant	Insignificant
Significant		if Mitigated

5. Water Related Impacts (Runoff, Flood Hazard, Quality and Quantity of Surface and Ground Waters)

Runoff. Storm water runoff from the site would increase as a result of new development. The effect of increased runoff on the on-site natural drainage swales and downstream is not known at this time.

Water Quality. Pollutants, typical of those found in similar residential and agricultural areas, would be introduced to surface drainage.

Flooding. The site lies outside of mapped flood areas.

Groundwater Contamination. The old Pleasanton landfill is located within the project boundaries. A methane collection system is currently in operation at the landfill. A water quality investigation of the landfill would need to be completed to determine the potential impacts on project development.

<u>X</u>		
May be	Insignificant	Insignificant
Significant		if Mitigated

6. Plant and Animal Impacts (Effect on Existing Ecosystem, Rare or Endangered Species, etc.)

The site is characterized by agricultural land and rolling hillsides covered with grasses, shrubs, and numerous trees. The site includes mixed oak woodland on upland slopes, non-native annual grassland, and scattered remnants of riparian woodland.

A survey of the site was conducted by Gary A. Beeman, Wildlife Consultant, in the spring and summer of 1992. Concerns identified in the survey are noted below.

Wetlands. Seasonal drainages on the site may be determined to be jurisdictional wetlands, regulated by the U.S. Army Corps of Engineers.

Heritage Trees. The City of Pleasanton has a Heritage Tree Ordinance which regulates the removal of large trees. An inventory of heritage-size valley oaks on the site has been completed; 121 trees have been so identified. The exact number of trees potentially at risk from the proposed development is not yet known.

Plant and Wildlife Species - General. Based on the site survey, a list of identified plant and wildlife species has been completed. These species are characteristic of oak woodland, non-native annual grassland, and riparian woodland habitats.

Sensitive Plant Species. The CNDDDB and the CNPS inventory of Rare and Endangered Vascular Plants of California were consulted to provide information about sensitive species. Site surveys were conducted to coincide with blooming periods of sensitive species. The site survey included a special focus on large-flowered fiddleneck, balsamroot, caper fruited tropidocarpum, diamond-petaled poppy, and Mt. Diablo buckwheat. None of these species was found. Valley Oak, a CNPS List 4 (watch list) species, was found on the site.

Sensitive Wildlife Species. The CNDDDB, correspondence with the U.S. Fish and Wildlife Service, and the Audubon Society Blue List were consulted. The survey area was considered to be marginal kit fox habitat. The California tiger salamander, a species of special concern to the California Department of Fish and Game, was recorded in ponds just north of the project site. The pallid bat was identified on the site.

X
May be
Significant

Insignificant

Insignificant
if Mitigated

7. Transportation/Circulation Impacts (Additional Traffic, Congestion, Parking, Hazards, etc.)

The primary vehicular access to the site is Vineyard Avenue. This street is proposed for realignment to improve traffic flow. The project would have potential impacts on traffic levels in surrounding neighborhoods. A detailed traffic report will be required to determine the effects upon traffic Levels-of-Service (LOS), safety, and related issues in the project vicinity.

X
May be
Significant

Insignificant

Insignificant
if Mitigated

8. Noise Impacts (Increases, Exposure to High Levels)

A noise study prepared for the Vineyard Corridor in 1992 identified three major noise sources which affect the site: (1) the existing RMC Lonestar gravel harvesting operation to the north; (2) future gravel harvesting operations near the site; and (3) Vineyard Avenue traffic. Five new noise sources would be created by the project, including the: (1) community park; (2) elementary school; (3) potential commercial uses; (4) agricultural activities; and (5) temporary construction traffic.

<u>X</u>		
May be Significant	Insignificant	Insignificant if Mitigated

9. Impacts on Public Services (Fire, Police, Schools, Parks, Maintenance, etc.)

The proposed residential development would result in incremental increases in the demand for parks, school facilities, and public services such as police and fire services. A new community park and elementary school are proposed on site to help alleviate some of these impacts.

	<u>X</u>	
May be Significant	Insignificant	Insignificant if Mitigated

10. Impact on Utilities (Water, Sewer, Storm Water Drainage, Solid Waste, etc.)

Proposed development would result in an incremental increase in the demand for utilities. This would require an extension of sewer and water mains and other utilities onto the site, subject to specific conditions and City design standards. The location and elevation of the property could require special measures to provide water and sanitary sewer service to the proposed residential lots.

<u>X</u>		
May be Significant	Insignificant	Insignificant if Mitigated

11. Growth-Inducing Impacts

The proposed General Plan Amendment and Specific Plan would not facilitate or influence additional future growth in the area.

<u> </u>	<u> X </u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

12. Energy Impacts

The construction phases of the development would result in minor temporary energy impacts. New structures would cause incremental increases in the demand for energy (i.e., more vehicles, heating/cooling, etc.). However, development would be subject to local and state energy conservation standards.

<u> </u>	<u> X </u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

13. Aesthetic Impacts (Obstruction of Views, Design, etc.)

Development and changes to the topography and vegetation on upper elevations may be visible from some areas of the City and lands to the east.

<u> X </u>	<u> </u>	<u> </u>
May be	Insignificant	Insignificant
Significant		if Mitigated

14. Impacts on Archaeological or Historical Sites

In September, 1992, Holman and Associates conducted an archaeological field inspection of the site.

Archaeological Resources. No known archaeological sites are present on the site or in its vicinity, based on a search of references. No visible prehistoric resources were discovered during the field inspection. However, if archaeological or historical resources are uncovered during site development, construction would need to be halted and an evaluation of the resources conducted at that time.

Historic Resources. Three potentially historic resource areas were noted during a field reconnaissance. These areas include two existing homes and the remains of a farm or ranch complex. None of these structures are architecturally unique or significant as an example of a particular style. However, these structures are probably at least 50 years of age and thus, potentially significant. Such significance would be demonstrated by their historic association with persons or events important to the area or the region.

 X
May be
Significant

Insignificant

Insignificant
if Mitigated

YES

NO

15. Is there any serious public controversy concerning the environmental effects of the proposed project?
If so, list below.

 X

- Potential traffic safety and Level-of-Service (LOS) impacts on City streets.
- New grading and home construction could create visual intrusions.
- Some existing agriculture/grazing uses on the site would be permanently eliminated, and the amount of open space would be reduced in area.
- The impact of vineyard fertilizers and pesticides on existing and future Plan Area residents and facility users.

IV. MANDATORY FINDINGS OF SIGNIFICANCE

YES

NO

1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

 X

- | | <u>YES</u> | <u>NO</u> |
|--|----------------------|----------------------|
| 2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in relatively brief, definitive period of time while long-term impacts will endure well into the future.) | _____ | _____ <u>X</u> _____ |
| 3. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources, where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.) | _____ | _____ <u>X</u> _____ |
| 4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | _____ <u>X</u> _____ | _____ |

V. STAFF RECOMMENDATION

_____ I find the proposed project would not have a significant effect on the environment and, thus, recommend a Negative Declaration be prepared.

_____ I find that the mitigation measures recommended in the Environmental Impact Report for the development for those aspects of the project which could have a significant effect would reduce the effects to insignificant levels and, thus, since such measures are included as conditions to project approval, I recommend a Negative Declaration be prepared.

 X I find the proposed project may have a significant effect on the environment, and, thus, recommend an Environmental Impact Report be prepared.

Date 2/25/98

Signature Wayne Rasmussen
Wayne Rasmussen
Principal Planner

Mark C. Posson
3036 Chardonnay Drive
Pleasanton, CA 94566

March 9, 1998

Wayne Rasmussen
Principal Planner
Department of Planning and Community Development
City of Pleasanton
P.O. Box 520
Pleasanton, CA 94566-0802

RE: Draft EIR, Vineyard Avenue Corridor Area

Dear Mr. Rasmussen:

I have received a copy of the notice of preparation of the EIR for the above referenced project and wish to provide input on the scope of the study and impact mitigation.

Vineyard traffic and noise. Traffic on Vineyard Avenue has increased dramatically with the addition of Ruby Hill and removal of the 'S' curve. This has resulted in increased noise along the corridor and increased public safety risk. The proposed General Plan Amendment and Specific Plan will increase the impacts even further. Although noise and traffic are standard elements of CEQA review, the specific impact of increase traffic and noise on the neighborhoods currently adjacent to Vineyard Avenue should be emphasized with a focus on mitigating measures.

As mitigating measures, I would suggest the reduction of speed limit from Bernal to Montevino, the installation of a sound wall along the southern portion of this section and closure of Sauterne Avenue with the installation of the sound wall segment. Closure of Sauterne will also remove the public safety risk of the low visibility of eastbound traffic when turning onto Vineyard from Sauterne. The closed portion of Sauterne facing Chardonnay Dr. could be converted to a small community garden which would further attenuate noise in the

neighborhood. Closure would have a minimal travel impact on the few residents [including myself] who would have to travel to Touriga Dr. to access Vineyard and would have a positive impact on public safety due to the improved visibility of turning eastbound.

Please keep me apprised of any future meetings and documents which become available regarding this proposal.

Sincerely,

A handwritten signature in cursive script that reads "Mark Posson". The signature is fluid and extends to the right with a long, horizontal flourish.

Mark Posson

March 16, 1998

Wayne Rasmussen, Principal Planner
City of Pleasanton, Planning Department
P.O. Box 520
Pleasanton, CA 94566

Dear Wayne:

We would like to take this opportunity to discuss our concerns regarding the development of the site specific plan for the Vineyard Corridor. We are located at 710 Foxbrough Place, abutting the old dump site and the McGuire property. I understand that the McGuire property is zoned for low density housing, less than two homes per acre. We don't have issue with this zoning but do have the following concerns:

1. Grading/cutting down the hill. We are concerned that cutting the top of the hill would do two things: create possible instability in the hill, and move any development that much closer to our home.
2. Privacy. We would like to be sure that our current level of privacy is maintained through the use of single story homes, minimum setbacks from the rear of the flat part of the building pad, screening the homes through the use of shrubs or trees, and/or placement of windows in such a way as to not be pointing in our direction.
3. What will be the use of the small section of flat land at the bottom of the hill adjoining the dump site?

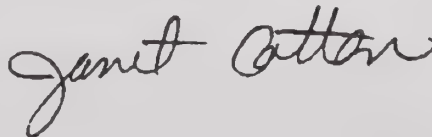
In regards to the old dump site, we understand it is intended to be used as a community park. We want to be sure that, again, our privacy is maintained. If the area adjoining our development can be left as maintained open space, a jogging trail, vineyards, or some other natural looking, low usage area, it would be more tolerable to us. We also have views of the distant hills we would like protected. We definitely do NOT want any lighted facilities or high usage fields, such as soccer, football, or baseball, visible from our home.

We realize how difficult it is to meet everyone's needs, but feel these issues are valid and want them to be considered in the development of the Site Specific plan now underway.

Sincerely,



Don and Janet Cotton, residents
710 Foxbrough Place
Pleasanton, CA 94566
510-462-6657



RECEIVED

MAR 20 1998

CITY OF PLEASANTON
PLANNING DEPT.

Thomas A. Herbert
3004 Crestablanca Drive
Pleasanton, CA 94566
510-846-8768

Wayne Rasmussen
City of Pleasanton
Department of Planning and Community Development
Post Office Box 520
Pleasanton, CA 94566-0802

RE: Preparation of a Draft Environmental Impact Report for the Vineyard Corridor Specific Plan

Mr. Rasmussen

Once again it seem like Greed has overtaken Common sense and I am concerned about the Proposed Development. I have lived in the area adjacent to the proposed site for the past few years and my concerns deal with the poor planning and infrastructure that currently exists and how that will degraded with the proposed activities.

Vineyard Ave is little more than a paved cow path let alone a major traffic corridor that will support Vintage Heights, Ruby Hills and The Proposed Activities (TPA). To support Ruby Hills, Montevino and Vineyard got four stop sign and occasionally a police officer to enforce the Stop Signs and Speed Zones, maybe will get a traffic light! WHAT HAPPENED TO THE ISABEL CONNECTOR TO I-580? Without any type of real infrastructure, the TPA will compound the already complex and congested traffic problem. And don't rely on just your road counters for data; get some video cameras out early and on weekends so you can get a better picture of the daily congestion and havoc that the TPA will create as proposed.

Another issue is water and sewage! I'm not sure with all the talk in the paper about agreements and water treatment plans just how sewage for Ruby Hills is handled BUT I would like to see the data on current usage, current capacity, and growth potential. I do know that a very small water pipe went down Vineyard to service Ruby Hills. At the time it seemed very small. I would like to see data on the current usage against the Ruby Hills Build Plan and how the TPA development will be serviced.

The third area is overall infrastructure for the farmland! Take a look at all the patches in the street and provide information regarding the UNDERGROUND electrical, gas, phone, and video services provided in our current the rural area. PG&E is constantly working in this area and the TPA looks even more contoured than the adjacent area.

I realize that for now that these are just ramblings but I am interested in your project and it is part of your tasks to solicit ideas, comments and concerns. Please log my ramblings and add me to your lists of concerned citizens.

Thank You

Sincerely,



Thomas A. Herbert

865 Clara Lane
Pleasanton, CA 94566
March 12, 1998

Wayne Rasmussen, Principal Planner
Dept..of Planning & Community Development
P.O. Box 520
Pleasanton, CA 94566-0802

TO: Wayne Rasmussen

RE: Vineyard Avenue Corridor

This letter is a follow-up to our phone conversation on 3/2/98.

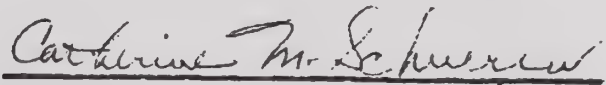
#1- DEIP - Concern for the preservation of an active raptors'
nest in the vicinity of Clara Lane.

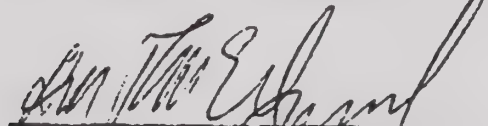
#2- Specific Plan Options

- a.) Document our desire to be able to subdivide our property, while also.....
- b.) Document our desire to maintain the legal, nonconforming agricultural use of this property for us and/or future owners. We would also want a stipulation that when nearby development occurs that animals maintained on our property are legal and not considered a nuisance..

Thank you for all of your assistance. We look forward to hearing from you again.

Yours truly,


Catherine M. Schueren


Abdel Fattah M. El Gammal


Janet R..El Gammal

484-0685

REGIONAL PARKS

EAST BAY REGIONAL PARK DISTRICT

March 23, 1998

RECEIVED

MAR 25 1998

CITY OF PLEASANTON
PLANNING DEPT.

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Wayne Rasmussen, Principal Planner
City of Pleasanton
Department of Planning and Community Development
P.O. Box 520
Pleasanton, CA 94566-0802

RE: Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR)
Vineyard Avenue Corridor Specific Plan
Shadow Cliffs to Del Valle Regional Trail

Dear Mr. Rasmussen:

Thank you for including East Bay Regional Park District in your distribution of the NOP of a draft EIR for the Vineyard Avenue Corridor Specific Plan. We would like to offer the following comments:

RECREATION

Shadow Cliffs to Del Valle Regional Trail

The area covered by the proposed Specific Plan and Rezoning is either immediately adjacent to or encompasses the area of Arroyo Del Valle which is the future location of a portion of the District's Shadow Cliffs to Del Valle Regional Trail. The EIR should address any potential impacts to this proposed alignment of the trail. Development of this area should not preclude the development of nor restrict access to this trail, both for trail users and for maintenance vehicles. Any development projects should address local access to this trail. When specific development plans are being formulated, we request that the City's EIR require that the applicant consult with our Regional Trails Specialist to determine any potential impacts on trail locations. Please contact Steve Fiala at 510-635-0138 extension 2602.



Wayne Rasmussen
City of Pleasanton
March 23, 1998
Page 2

AESTHETICS

Since the area covered by the Specific Plan is now mostly open space and any development projects will be clearly visible from this trail, the EIR should address the visual impacts on trail users. A visual analysis should be performed to analyze the aesthetic impacts to trail users. If significant impacts are anticipated, the EIR should address appropriate mitigation measures for these impacts, including scenic easements, architectural treatments, landscaping, etc. A visual simulation clearly showing impacts of the project and project alternatives should be included in the draft EIR if project-level information is available.

It should be noted that in addition to the Shadow Cliffs to Del Valle Regional Trail and other regional trails in the vicinity, Shadow Cliffs Regional Park is located at the northern end of the project area and is a major recreational draw to the area.

If you have any questions regarding these comments, please contact Susan Canale, Resource Analyst, at 510-635-0138 extension 2603. Please forward a copy of the draft EIR to us for review and any other correspondence regarding this project. Thank you again for including East Bay Regional Park District in this review process.

Sincerely,



Brad Olson
Environmental Specialist

SJC

enclosure

cc: Susan Canale
Martin Vitz

ALAMEDA COUNTY CONGESTION MANAGEMENT AGENCY



March 25, 1998

RECEIVED

MAR 30 1998

CITY OF PLEASANTON
PLANNING DEPT.

AC Transit
Director
Matt Williams

Alameda County
Supervisor
Gail Steele

City of Alameda
Mayor
Ralph Appuzzo

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BART
Director
Margaret K. Prior

City of Berkeley
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City of Dublin
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Dave Burton

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City of Pleasanton
Councilmember
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City of San Leandro
Mayor
Ellen Corbett

City of Union City
Mayor
Mark Green

Executive Director
Dennis R. Fay

Mr. Wayne Rasmussen
Department of Planning and Community Development
City of Pleasanton
200 Old Bernal Avenue
P.O. Box 520
Pleasanton, CA 94566-0802

SUBJECT: Comments on the Notice of Preparation for a Draft Environmental Impact Report and General Plan Amendment 97-02 for the Vineyard Avenue Corridor Specific Plan Located in the City of Pleasanton

Dear Wayne:

Thank you for the opportunity to comment on Pleasanton's Notice of Preparation for a Draft Environmental Impact Report (DEIR) and General Plan Amendment (GPA) for the Vineyard Avenue Corridor Specific Plan. The 368-acre project is located on both sides of Vineyard Avenue starting at approximately 200 feet east of Montevino Drive and extending in an easterly direction. The development of the Vineyard Avenue Corridor project would allow the development of 189 dwelling units, a 20-acre community park and a 12-acre elementary school.

The CMA respectfully the following comments:

- The Pleasanton City Council adopted Resolution #92-135 on July 7, 1992 establishing guidelines for reviewing the impacts of local land use decisions consistent with the Alameda County Congestion Management Program (CMP). Based on conversations with you and our review of the NOP, the proposed project appears to generate at least 100 p.m. peak hour trips over baseline conditions. If this is the case, the CMP guidelines require the City to submit land use data to enable the CMA to conduct a traffic analysis of the project using the Countywide Transportation Demand Model for Year 2000 conditions (see attached Summary Data Form). If a model other than the Countywide Transportation Model is used, a comparison must be made of the traffic projections. If the model results differ, for purposes of CEQA, the higher projections must be used to determine project impacts. The comparison of the model results showing which volumes are higher must be included in the environmental documentation. Please note the following paragraph as it discusses the responsibility for modeling. You should also note that the ACCMA has not certified the Tri-Valley model for CMP purposes.
- The Countywide Model was recently updated to Projections '96 for base years 2000 and 2010. We have found that Projections '96 tends to underestimate employment in high growth areas in Alameda County and other Bay Area counties. As a result, the CMP model runs for the project will use the Year 2000 transportation network with Projections '96 Year 2010 land use assumptions. This will provide the most conservative estimate of project impacts

for CMP purposes. The ACCMA will update the Countywide Model to Projections '98 and Year 2005 and Year 2015 base years in the summer of 1998. Until this update is completed, only the Year 2000 impacts must be analyzed using Projections '96 2010 land use assumptions. Because of recent policy changes, the local jurisdictions are responsible for conducting the model runs themselves or through a consultant. The Countywide model is available to the local jurisdictions for this purpose. The ACCMA does have a consultant who is able to do the CMP model runs for the local jurisdictions on a time and materials basis with the costs to be borne by the local jurisdictions. The local jurisdictions may choose to request these model runs through the ACCMA or directly with DKS Associates.

- Potential impacts of the project on the Metropolitan Transportation System (MTS) need to be addressed. (See 1995 CMP Figures E-2 and E-3, pages viii and ix and Figure 4, page 16). The DEIR should address all potential impacts of the project on the MTS roadway and transit systems. These include I-580, I-680, SR 84, Stanley Boulevard, Sunol Boulevard, Bernal Avenue and other MTS routes that would be impacted by the project as well as BART and LAVTA.
- Potential impacts of the project on MTS roadway levels of service must be analyzed. (See 1995 CMP, Chapter 3). The CMP roadway level of service standard is LOS E for designated roadways, except where LOS F was originally measured at the time the CMP was adopted (October 24, 1991). The standard for these roadways is the existing LOS. The LOS F roadway segments are presented in the 1995 CMP on Tables 4 and 5 (pages 30 through 32) and Figure 8 (page 34). It should be noted that although a roadway segment may be operating at LOS F, this does not preclude proposing mitigation measures for that facility.
- The CMA requests that there be a discussion on the proposed funding sources of the transportation mitigation measures identified in the environmental documentation. The CMP establishes a Capital Improvement Program (See 1995 CMP, Chapter 7) that assigns priorities for funding roadway and transit projects throughout Alameda County. The improvements called for in the DEIR should be consistent with the CMP CIP. Given the limited resources at the state and federal levels, it would be speculative to assume funding of an improvement unless it is consistent with the project funding priorities established in the Capital Improvement Program (CIP) of the CMP, the federal Transportation Improvement Program (TIP), or the recently adopted Regional Transportation Plan (RTP). Therefore, we are requesting that the environmental documentation include a financial program for all roadway and transit improvements.
- The adequacy of any project mitigation measures should be discussed. On February 25, 1993 the CMA Board adopted three criteria for evaluating the adequacy of DEIR project mitigation measures:
 - ✓ Project mitigation measures must be adequate to sustain CMP service standards for roadways and transit;
 - ✓ Project mitigation measures must be fully funded to be considered adequate;

Mr. Wayne Rasmussen

March 25, 1998

Page 3

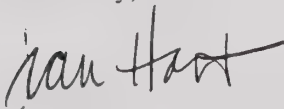
- ✓ Project mitigation measures that rely on state or federal funds directed by or influenced by the CMA must be consistent with the project funding priorities established in the Capital Improvement Program (CIP) section of the CMP or the Regional Transportation Plan (RTP).

It would be helpful to indicate in the DEIR the adequacy of proposed mitigation measures relative to these criteria. In particular, the DEIR should detail when proposed roadway or transit route improvements are expected to be completed, how they will be funded, and what would be the effect on LOS if only the funded portions of these projects were assumed to be built prior to project completion.

- Potential impacts of the project on CMP transit levels of service must be analyzed. (See 1995 CMP, Chapter 4). Transit service standards are 15-30 minute headways for bus service and 3.75-15 minute headways for BART during peak hours. The DEIR should address the issue of transit funding as a mitigation measure in the context of the CMA's policies as discussed above.
- The DEIR should consider demand-related strategies that are designed to reduce the need for new roadway facilities over the long term and to make the most efficient use of existing facilities (see 1995 CMP, Chapter 5). The DEIR could consider the use of TDM measures, in conjunction with roadway and transit improvements, as a means of attaining acceptable levels of service. Whenever possible, mechanisms that encourage ridesharing, flextime, transit, bicycling, telecommuting and other means of reducing peak hour traffic trips should be considered. Street layout and design strategies would foster pedestrian and bicycle connections and transit-friendly site design should also be considered. The Site Design Guidelines Checklist may be useful during the review of the development proposal. A copy of the checklist is enclosed.

Once again, thank you for the opportunity to comment on this Notice of Preparation. Please do not hesitate to contact me or Beth Walukas at 510/836-2560 if you require additional information.

Sincerely,



Jean Hart
Deputy Director

cc: Beth Walukas, Senior Transportation Planner
file: CMP - Environmental Review Opinions - Responses - 1998

Land Use Analysis Program
TIER I (a) and (b) SUMMARY DATA FORM
October 29, 1996

To comply with the Alameda County Congestion Management Agency's Tier I Land Use Analysis Program requirement, a jurisdiction must complete and return this form and a copy of the Tier I (a) or (b) application document to the CMA. If required, an ASCII file format of the data may be requested by the CMA. This form is not complete unless all questions are answered (attach additional pages, if necessary):

1. Describe project, including location of proposed street access and relationship to the MTS roadway system.

2. Attach a study area map to this form.

3. Describe the types of uses to be included in the project (e.g. single family dwellings, low income senior housing units, etc.).

4. Will any trips generated by low or very low income housing be excluded in determining if this GPA generates 100 or more additional PM peak hour trips? Yes__ No__. If yes, attach supporting documentation describing the low or very low income housing, and the methodology used to identify and subtract those trips from total trips.

5. Have any traffic studies been prepared for this project? Yes__ No__. If yes, attach to this form.

6. What is the expected occupancy date (year) for this project? If a multi-phase project, give the expected occupancy date for each phase _____.

7. By the year 2000, what percentage of the project is expected to be completed (e.g. 10%, 50%, etc.)?

8. Complete Table 1 (attached), describing net demographic change by Traffic Analysis Zone that is expected to occur with this project. Indicate none, if appropriate.

Jurisdiction:
 Submittal Date:
 Contact Person and Phone Number:
 Project Name:

Table 1
 Projected Demographic Change in the Year: _____

TAZ (1) Local Ala Co.	Demographic Change	Employed Residents	Households	Household Population	Employment				Total Employment	Comments
					Manu- facturing	Other	Retail	Services		
	Projections									
	GPA/NOP									
	Exclusions (2)									
	Subtotal									
	Projections									
	GPA/NOP									
	Exclusions (2)									
	Subtotal									
	Projections									
	GPA/NOP									
	Exclusions (2)									
	Subtotal									
	Projections									
	GPA/NOP									
	Exclusions (2)									
	Subtotal									

(1) = Traffic Analysis Zone
 (2) = Low or very low income housing

Name of Jurisdiction:

Contact Person and Phone Number:

Design Strategies Checklist
for the
Transportation Demand Management Element
of the
Alameda County CMP

The Transportation Demand Management Element included in the 1995 Congestion Management Program requires each jurisdiction to comply with the “Required Program”. This requirement can be satisfied in three ways: 1) adoption of “Design Strategies for encouraging alternatives to auto use through local development review” prepared by ABAG and the Bay Area Quality Management District; 2) adoption of new design guidelines that meet the individual needs of the local jurisdictions and the intent of the goals of the TDM Element , or 3) evidence that existing policies and programs meet the intent of the goals of the TDM Element.

For those jurisdictions that have chosen to satisfy this requirement by Option 2 or 3 the following checklist has been prepared. In order to insure consistency and equity throughout the County, this checklist identifies the components of a design strategy that should be included in a local program to meet the minimum CMP conformity requirements. The required components are highlighted in bold type and are shown at the beginning of each section. A jurisdiction must answer Yes to each of the required components to be considered consistent with the CMP. Each jurisdiction will be asked to annually certify that it is complying with the TDM Element. Local jurisdictions will not be asked to submit the back-up information to the CMA justifying its response; however it should be available at the request of the public or neighboring jurisdictions.

Questions regarding optional program components are also included. You are encouraged but not required to answer these questions. ACTAC and the TDM Task Force felt that it might be useful to include additional strategies that could be considered for implementation by each jurisdiction.

CHECKLIST

Bicycle Facilities

Goal: To develop and implement design strategies that foster the development of a countywide bicycle program that incorporates a wide range of bicycle facilities to reduce vehicle trips and promote bicycle use for commuting, shopping and school activities. (Note: examples of facilities are bike paths, lanes or racks.)

Local Responsibilities:

→ 1a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

→ 1a.1 that provide a system of bicycle facilities that connect residential and/or non-residential development to other major activity centers?

Yes No

1a.2 bicycle facilities that provide access to transit?

Yes No

1a.3 that provide for construction of bicycle facilities needed to fill gaps, (i.e. gap closure), not provided through the development review process?

Yes No

1a.4 that consider bicycle safety such as safe crossing of busy arterials or along bike trails?

Yes No

1a.5 that provide for bicycle storage and bicycle parking for (A) multi-family residential and/or (B) non-residential developments?

Yes No

→ 1b. How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance

Design Review

Standard Conditions of Approval

Capital Improvement Program

Specific Plan

Other

Pedestrian Facilities

Goal: To develop and implement design strategies that reduce vehicle trips and foster walking for commuting, shopping and school activities.

Local Responsibilities

→ 2a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that incorporate the following:

→ 2a.1 that provide reasonably direct, convenient, accessible and safe pedestrian connections to major activity centers, transit stops or hubs parks/open space and other pedestrian facilities?

Yes No

→2a.2 that provide for construction of pedestrian paths needed to fill gaps, (i.e. gap closure), not provided through the development process?

Yes No

2a.3 that include safety elements such as convenient crossing at arterials?

Yes No

2a.4 that provide for amenities such as lighting, street trees, trash receptacles that promote walking?

Yes No

2a.5 that encourage uses on the first floor that are pedestrian oriented, entrances that are conveniently accessible from the sidewalk or transit stops or other strategies that promote pedestrian activities in commercial areas?

Yes No

→2b. How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance

Design Review, such as ADA Accessibility Design Standards

Standard Conditions of Approval

Capital Improvement Program

Specific Plan

Other

Transit

Goal: To develop and implement design strategies in cooperation with the appropriate transit agencies that reduce vehicle trips and foster the use of transit for commuting, shopping and school activities.

Local Responsibilities

3a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

→3a.1 provide for the location of transit stops that minimize access time, facilitate intermodal transfers, and promote reasonably direct, accessible, convenient and safe connections to residential uses and major activity centers?

Yes No

→3a.2 provide for transit stops that have shelters or benches, trash receptacles, street trees or other street furniture that promote transit use?

Yes No

→3a.3 that include a process for including transit operators in development review?

Yes No

3a.4 provide for directional signage for transit stations and/or stops?

Yes No

3a.5 that include specifications for pavement width, bus pads or pavement structure, length of bus stops, and turning radii that accommodates bus transit?

Yes No

→3.b How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance

Design Review

Standard Conditions of Approval

Capital Improvement Program

Specific Plan

Other

Carpools and Vanpools

Goal: To develop and implement design strategies that reduce the overall number of vehicle trips and foster carpool and vanpool use.

Local Responsibilities:

4a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

4a.1 For publicly owned parking garages or lots, are there preferential parking spaces and/or charges for carpools or vanpools?

Yes No

4a.2 that provide for convenient or preferential parking for carpools and vanpools in non-residential developments?

Yes No

4.b How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance
Design Review
Standard Conditions of Approval
Capital Improvement Program
Specific Plan
Other

Park and Ride

Goal: To develop design strategies that reduce the overall number of vehicle trips and provide park and ride lots at strategic locations.

Local Responsibilities:

5a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

5a.1 promote park and ride lots that are located near freeways or major transit hubs?

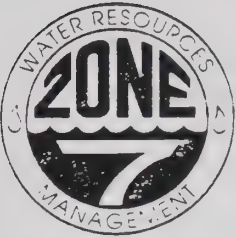
Yes No

5a.2 a process that provides input to Caltrans to insure HOV by-pass at metered freeway ramps?

Yes No

5b. How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance
Design Review
Standard Conditions of Approval
Capital Improvement Program
Specific Plan
Other



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588-5127

PHONE (510) 484-2600 FAX (510) 462-3914

March 26, 1998

RECEIVED

MAR 30 1998

CITY OF PLEASANTON
PLANNING DEPT.

Mr. Wayne Rasmussen
Principal Planner
Department of Planning & Community Development
P.O. Box 520
Pleasanton, CA 94566-0802

***Re: Notice of Preparation of a Draft Environmental Impact Report
for the Vineyard Avenue Corridor Specific Plan***

Dear Mr. Rasmussen:

We received the notice of preparation of a DEIR for Vineyard Avenue and have the following comments:

Wells

There are several wells located on the site and as Zone 7 reviews future design drawings, we will locate the wells on the plans. Wells without a documented intent of future use should be properly destroyed under a permit from Zone 7.

Existing Pipeline

Zone 7 owns the 36-inch Vineyard Pipeline running down Vineyard Avenue. Please provide future construction plans for Zone 7's review and comment.

Flooding

In relation to the proposed development adjacent to Arroyo Del Valle, the developer should demonstrate that this reach of the Arroyo can take the 100-year flood flows with a minimum of one foot of freeboard. The side slopes of the Arroyo should be stabilized with a minimum set back of 30 feet from the top of the bank and a 20-foot wide maintenance road.

The development is close to Lake "B" of the future chain of lakes; therefore, its impact on the lake should be studied.

Mr. Wayne Rasmussen
March 26, 1998
Page 2

Future Water Demands

Forecasted water deliveries associated with this development should be included in the City of Pleasanton's annual delivery request to Zone 7.

Very truly yours,



Betty Graham
Asst. Chief, Water Supply Engineering

BG:DWM:arr

cc: Steve Cusenza, Pleasanton Water Dept.

STATE OF CALIFORNIA—BUSINESS AND TRANSPORTATION AGENCY

PETE WILSON

DEPARTMENT OF TRANSPORTATION

BOX 23860

OAKLAND, CA 94623-0860

(510) 286-4444

TDD (510) 286-4454



March 30, 1998

ALA-680-16.75

ALA680223

Mr. Wayne Rasmussen, Principle Planner
City of Pleasanton
200 Old Bernal Avenue, P.O. Box 520
Pleasanton, California 94566-0802

Dear Mr. Rasmussen:

Re: Vineyard Avenue Corridor Specific Plan-Notice of Preparation

Thank you for continuing to include the California State Department of Transportation (Caltrans) in the environmental review process for the above-referenced proposal. We have reviewed the NOP and recommend that a traffic analysis be prepared for this project. To adequately address our concerns with the operations of SR-84 and I-680 in the circulation element of the EIR, please ensure that the following information is provided in the study:

1. The Traffic Impact Report should include a discussion the project impacts and proposed mitigations of those impacts to I-580 on/off-ramps mainline and to SR-84, Vallecitos Road.
2. The trip generation, distribution and assignment. Data must be current and the controlling intersection need to be looked as well.
3. All mitigation proposed should fully discussed in the environmental document. These discussions should include but not limited to the following areas, financing, implementation, responsibilities, scheduling and lead agency monitoring.
4. The City of Pleasanton should require consider designing this development as a transit and pedestrian friendly facility. (i.e. providing bike facilities, bus turnouts and shelters near the work site, on site food service area, shower facilities, etc.) as means of reducing trips to the site as a possible mitigation measure.
5. A Schematic illustrations of traffic conditions for:
 - a) Existing
 - b) Existing plus project
 - c) Cumulative of all facilities evaluated and specific information should be provided for the affected intersections.

RASMUSSEN/ALA680223

March 30, 1998

Page 2

If you have any questions or concerns, please feel free to call Anthony Lee of my staff at 510-286-5583.

Sincerely,

HARRY YAHATA

District Director

By: 

PHILLIP BADAL

District Branch Chief

IGR/CEQA

CITY OF LIVERMORE



'Wine
Country
Since
1849'

RECEIVED

APR 15 1998

CITY OF PLEASANTON
PLANNING DEPT.

April 10, 1998

Wayne Rasmussen
Principal Planner
City of Pleasanton
P.O. Box 520
Pleasanton, California 94566-0802

SUBJECT: NOTICE OF PREPARATION OF A DRAFT EIR FOR THE VINEYARD
AVENUE CORRIDOR SPECIFIC PLAN

Dear Mr. Rasmussen:

Thank you for referring the Notice of Preparation of the Draft Environmental Impact Report (EIR) for the Vineyard Avenue Corridor Specific Plan to the City of Livermore. The project provides for development of approximately 189 new, low-density single family homes, a 20-acre community park, a 12-acre elementary school, and potentially an inn/spa/restaurant/conference facility.

The project appears to be located in the "Vineyard Avenue Transitional Area" identified in the South Livermore Valley Area Plan. The EIR should address the relationship of the project to the goals, objectives and policies of the plan. In particular, it should address the project relationship to the transitional area objectives of providing a graceful transition to and promoting recognition of the wine-producing region, and the payment of agricultural mitigation fees, as well as the designation of Vineyard Avenue as a "Wine Region Corridor".

The Scenic Route Element of the Livermore Community General Plan identifies Interstate 580, Vineyard Avenue and Isabel Avenue as scenic routes. The EIR should evaluate the visual implications of the development program, especially grading and development in hilly areas south of Vineyard Avenue.

Administration Building
1052 S. Livermore Avenue
Livermore, CA 94550-4899
(510) 373-5100
Fax (510) 373-5135

Mayor / Council
(510) 373-5149

City Manager
(510) 373-5140

City Attorney
(510) 373-5120
Fax (510) 373-5125

City Clerk
(510) 373-5130

Community Development
Building Division
(510) 373-5180
Fax (510) 373-5183
Engineering Division
(510) 373-5240
Fax (510) 373-5267
Planning Division
(510) 373-5200
Fax (510) 373-5135

Economic Development
(510) 373-5095

Finance Department
(510) 373-5150

Fire Department
4550 East Avenue
(510) 454-2361
Fax (510) 454-2367

Library
1000 S. Livermore Avenue
(510) 373-5500

Personnel
(510) 373-5110
Fax (510) 373-5035

Police Department
1110 S. Livermore Avenue
(510) 371-4900
Fax (510) 371-4950

Public Services
(510) 373-5270
Fax (510) 373-5317

April 10, 1998
Wayne Rasmussen
Page 2

The EIR should consider the potential use of the Vineyard Avenue corridor by Highway 84 peak hour commute traffic.

Again, we appreciate the opportunity to comment on the scope of the environmental document and look forward to receiving the Draft EIR. If you have any questions with regards to this matter, please do not hesitate to contact me at (510) 373-5200.

Sincerely,



Ricardo Bressanutti, AICP
Associate Planner

cc: Susan Frost

rb\vacspeir.ltr

appendix B

Traffic Data

The Traffic Report for the Vineyard Avenue Corridor Specific Plan Project has not been reprinted in this appendix because of its large size. The Traffic Report is available for public review at the following location:

City of Pleasanton
Department of Planning and Community Development
200 Old Bernal Avenue
Pleasanton, California 94566-0802

appendix C

**Cultural Resources Assessment Report
Vineyard Avenue Corridor Specific Plan**

**CULTURAL RESOURCES ASSESSMENT REPORT
VINEYARD AVENUE CORRIDOR SPECIFIC PLAN
CITY OF PLEASANTON, ALAMEDA COUNTY, CA.**

PREPARED FOR:

CITY OF PLEASANTON - PLANNING DEPARTMENT
123 MAIN STREET
PLEASANTON, CA 94566

PREPARED BY:



WILLIAM SELF ASSOCIATES
PO BOX 2192
ORINDA CA 94563
(925) 253-9070

AUGUST 1998

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D.P.R. Primary Records for WSA-1 AND WSA-2	
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EXECUTIVE SUMMARY

This report summarizes the results of a literature and record search and field survey for the proposed Vineyard Avenue Corridor Specific Plan project area, comprising 384 acres. The report was prepared under contract to the City of Pleasanton to meet the requirements for assessment of potential impacts to significant cultural resources as defined in Appendix K of the California Environmental Quality Act.

A record search was conducted on July 30, 1998 by the staff at the Northwest Information Center, Rohnert Park, California. The purpose of this search was to identify known cultural resource sites and previous surveys undertaken within one-quarter mile of the project area's boundaries. There was no record of cultural resource surveys having been conducted within the project boundary. Two cultural resource surveys have been previously conducted within one-quarter mile of the project area. No archaeological sites were recorded in either of the two surveys.

A pedestrian survey of about 276 acres within the 384 acre Vineyard Avenue Corridor Specific Plan project area was conducted on July 28-30, 1998 by William Self Associates staff archaeologists James M. Allan and Jason Reimers, and August 4 and 6, 1998 by Carrie D. Wills and Jason Reimers. Approximately 108 acres of steep slopes, previously graded or fully developed land within the project area, were excluded from survey, as the probability of finding either prehistoric or historic cultural material intact in those areas was deemed to be extremely low. No archaeological sites, features or objects were observed during the survey of the project area. Four historic structures estimated to be over 45 years old were identified on two parcels within the project area. The historic properties comprise two barns and two storage sheds. Each of the structures appears to retain its original wood siding. No resources currently listed on or eligible for listing on the National Register of Historic Places or the California Inventory of Historic Resources occur within the project area.

None of the structures noted within the area appear to meet the criteria for eligibility to the California Register of Historic Resources, therefore no mitigation associated with these structures is warranted. There is always a possibility that other historic or prehistoric resources may become visible once vegetation is removed or during construction excavation. Pursuant to Section IX of Appendix K of the California Environmental Quality Act, should any cultural resources be encountered during any construction on the proposed project, work in the immediate area should cease until such time that a qualified archaeologist can evaluate the find and recommend mitigation measures, if warranted.

PROJECT LOCATION AND DESCRIPTION

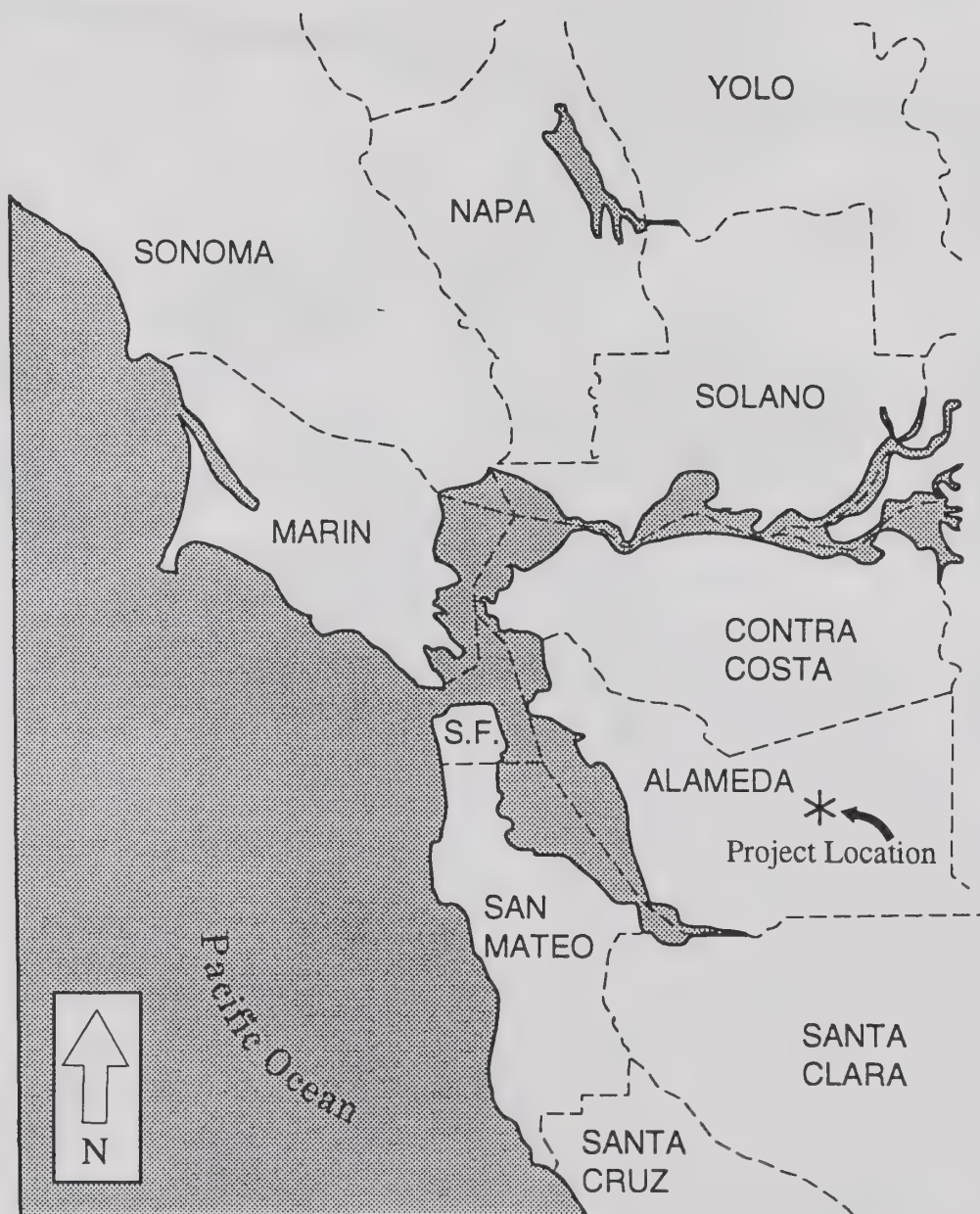
The proposed Vineyard Avenue Corridor project is located near the eastern edge of the Pleasanton city limits (Figure 1). The project area comprises approximately 380 acres of land on either side of Vineyard Avenue, approximately .5 miles south of Stanley Boulevard. To the north of the project area is the Shadow Cliffs Regional Recreation Area, to the southeast is the Ruby Hill residential development, to the northeast are active gravel quarries, and to the southwest are open, rolling hills (Figure 2). The project area has been subdivided into 33 parcels, ranging in size from .87 acres to 50.13 acres (Figure 3). Although a few of the parcels have been fully developed, the majority are predominately undeveloped except for residential structures, with the remaining acreage utilized for animal grazing or left as natural, undulating grassland. The northern side of Vineyard Avenue is a flat alluvial plateau terminating at the Arroyo del Valle. The ground surface is densely covered in tall bunch grasses and star thistle. The bulk of the project area lies on the southern side of Vineyard Avenue. It comprises flat grasslands also covered in tall, dense bunch grasses and star thistle that transition into rolling hills that, in turn, rise in steep slopes to the top of the ridgeline that defines the southern boundary of the project area.

NATURAL AND CULTURAL SETTING

Existing Environment

Today the San Francisco Bay encompasses the San Pablo and San Francisco Bays, Carquinez Strait, Suisun Bay, and numerous peripheral channels and tidelands. The San Francisco Peninsula lies along the southwest boundary of the San Francisco Bay region. At the northwest boundary is the Marin Peninsula. At the eastern boundary are the Berkeley Hills and the Diablo Range. The heart of the region is the San Francisco Bay system, which occupies a late Pleistocene trough which flooded repeatedly during the Pleistocene's interglacials. This trough extends to the south where it forms the Santa Clara and San Benito Valleys and to the north where it forms the Petaluma, Napa, and Sonoma Valleys (Moratto 1984).

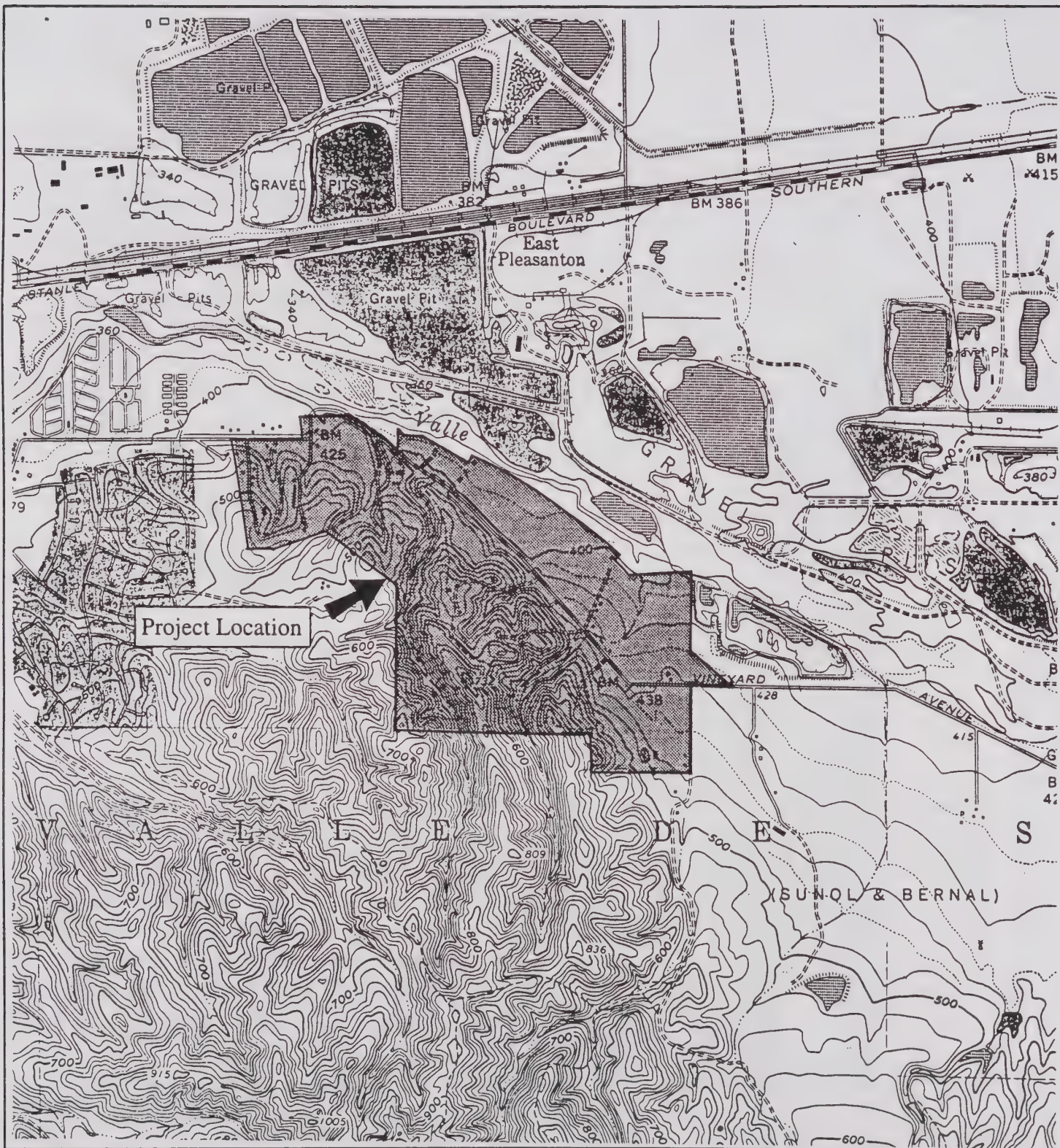
Located in the rolling foothills on the eastern side of the San Francisco Bay region, the project area is situated in the Upper Sonoran biotic zone which is adjacent to and east of the bay shore Lower Sonoran biotic zone. The project area is currently a mixed oak woodland-grass and chaparral community typified by grassland with scattered black oak, live oak, Oregon oak, and buckeye (Moratto 1984).



Project Vicinity Map

Figure 1

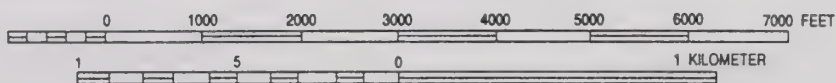
Vineyard Avenue Corridor
Pleasanton, CA



LIVERMORE, CALIF.

1961

PHOTOREVISED 1980



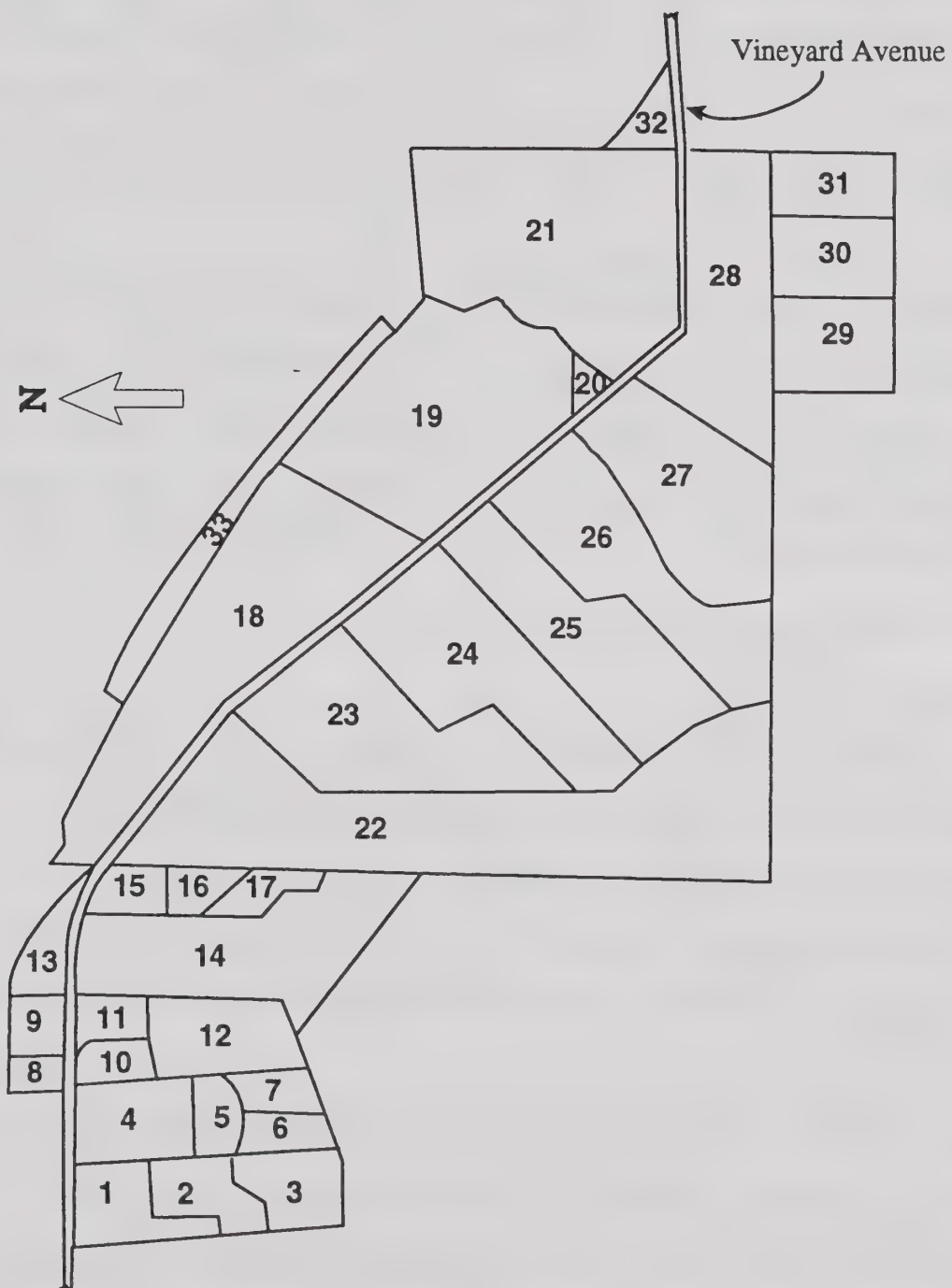
CONTOUR INTERVAL 20 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

Figure 2

Project Location Map

Vineyard Avenue Corridor
Pleasanton, CA



NOT TO SCALE

Parcel Boundary Map

Figure 3
Vineyard Avenue Corridor
Pleasanton, Ca.

The climate in the project vicinity is described as Mediterranean: mild, rainy winters, and hot, dry summers. Annual rainfall is concentrated in fall, winter, and spring. The San Francisco Bay region's proximity to the Pacific Ocean provides for mild temperatures year-round. During recent times, the mild climate, combined with the rich alluvial soils, drew agricultural settlers to the eastern portions of the Bay region.

Historic Land Changes

By 1830, agriculture and livestock had been introduced to the area. Farmers recognizing the rich potential of this region forever changed the landscape by channelizing streams, filling wetlands, and plowing the land. The arrival and proliferation of cattle and horses constituted one of the principal reasons for the disappearance of the California grasslands (Brown 1985:88). By 1851, wild oats, an introduced species noted as an excellent food source, was the dominant species in the valleys and foothills of the project area. Today nearly 400 introduced species, mostly annuals probably brought inadvertently from the Mediterranean by Spanish explorers, grow in the California grasslands.

Prehistoric Background

The chronological sequence for central California and the Lower Sacramento Valley begins with the Windmill Pattern (Fredrickson 1973) (Figure 4). Sites from this period date from about 4,500 (or earlier) to 3,500 years before the present (B.P.). Although earlier sites no doubt exist, sites from the Paleo-Indian Period, dating from about 12,000 to 8,000 B.P., and sites from an unnamed phase dating from about 8,000 to 4,500 B.P., are thought to be buried under Holocene alluvial deposits and are not well documented in this part of California (Ragir 1972). Various scholars have suggested Windmill sites are associated with an influx of peoples from outside of California who brought with them an adaptation to river-wetland environments (Moratto 1984:207).

Windmill sites are often situated in riverine, marshland and valley floor settings on small knolls above prehistoric seasonal floodplains. Most Windmill sites have possessed burials in what may be cemeteries. Typically, the remains are extended, oriented to the west, and contain copious amounts of mortuary artifacts. These artifacts often include large projectile points (spear or dart points) and a variety of fishing paraphernalia such as net weights, bone hooks, and spear points, as well as the vertebrate faunal remains of large and small mammals. Seed-grinding implements at the sites show that gathering and processing of seed resources was also common. Other artifacts such as charmstones, ochre, quartz crystals, Olivella and Haliotis

Dates	Heizer (1949)	Heizer and Cook (1949)	Bennyhoff & Heizer, in Heizer (1958b)	Heizer (1964)	Bennyhoff, in Fredrickson (1968)	Ragir (1972)	Fredrickson (1974)
1880	Phase III 1800-	LATE HORIZON	Phase 2	LATE HORIZON	American Period, 1850-	HOTCHKISS CULTURE	AUGUSTINE PATTERN (Hollister Aspect)
1500	Phase II 1700-		Late Phase 1		Sutter Period, 1839-		
	LATE HORIZON		Middle Phase 1		Mission Period, 1769-		
500	Phase I 500-	MIDDLE HORIZON	Early Phase 1	MIDDLE HORIZON	Phase 1d, 1100-	COSUMNES CULTURE	BERKELEY PATTERN (Morse Aspect)
A.D.					Phase 1c, 700-		
0					Phase 1b, 300-		
B.C.					Phase 1a, Middle-Late transition		
500	MIDDLE HORIZON		MIDDLE HORIZON				
1000							
1500							
2000	EARLY HORIZON	EARLY HORIZON			(Not Considered)	WINDMILLER CULTURE	WINDMILLER PATTERN
2500							
3000							
3500			EARLY HORIZON	EARLY HORIZON			
4000							
4500							
5000							
5500				--- ? ---			
6000							

Source: Moratto 1984

Chronological Cultural Sequence

Figure 4
Vineyard Avenue Corridor
Pleasanton, CA

shell beads in association with burial patterning and grave-good distribution suggest trade and a degree of ceremonialism may have been practiced.

The subsequent Berkeley Pattern (previously part of the middle Horizon) covers a period from about 3,500 to 1,500 B.P. in the San Francisco Bay region. This pattern overlaps somewhat with Windmill attributes at the beginning and with Late Prehistoric artifacts at the end. Berkeley Pattern sites are much more common and well documented, and therefore better understood, than Windmill sites. The sites are distributed in more diverse environmental settings, although a riverine focus is common.

Deeply stratified midden deposits (resulting from generations of occupation) are common to Berkeley Pattern sites, as are an abundance of milling and grinding stones for processing vegetal resources. Projectile points are progressively smaller and lighter over time, culminating in the introduction of the bow-and-arrow during the late prehistoric period. As mentioned above, although there are shared traits with Windmill manifestations, artifacts unique to Berkeley Pattern sites include slate pendants, steatite beads, stone tubes and ear ornaments, and burial techniques utilizing variable directional orientation, flexed body positioning, and a general reduction of mortuary goods (Fredrickson 1973; Moratto 1984).

The late prehistoric period (formerly the late Horizon) ranges from about 950 to 150 B.P. This period, characterized as the Augustine Pattern (Fredrickson 1973), is typified by intensive fishing, hunting and gathering (particularly acorns), a large population increase, increased trade and exchange networks, increases in ceremonial and social attributes, and the practice of cremation (in addition to flexed burial). Certain artifact types also typify the pattern: bone awls for use in basketry manufacture, small notched and serrated projectile points indicative of use of the bow-and-arrow, some pottery, clay effigies, bone whistles, and stone pipes. The Augustine Pattern and the late prehistoric period can be characterized as the apex of Native American cultural development in this part of California.

There is debate as to the niche of the San Francisco Bay Area in regional cultural schemes. Historically, much of the debate centers around whether Bay Area prehistoric cultural patterns are totally separate from, parallel to, or convergent with the cultural evolutions of the Lower Sacramento region. Bickel (1981:6-11) presents a detailed historical analysis of the changes in thinking about the Bay Area's place in regional culture history over the years; further analysis of the various cultural interrelationships can be found in Hughes (1994), Fredrickson (1993) and Elsasser (1986).

Ethnographic Background

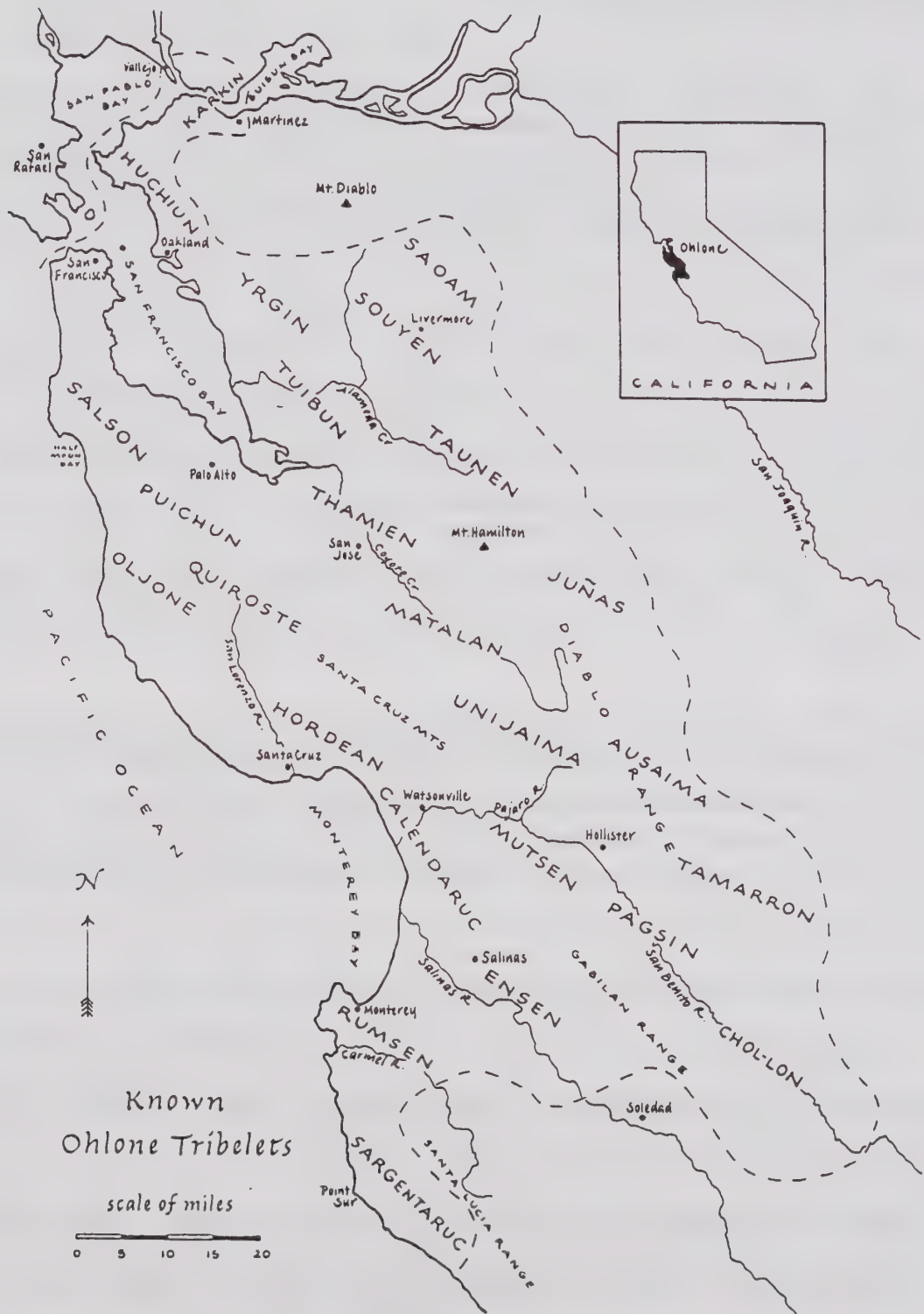
There is a considerable body of ethnographic literature on the Native American inhabitants of the project region. This section provides a brief summary of the ethnography of the area and is intended to provide a general background only. For a more extensive review of Ohlone ethnography, see Bocek (1986), Cambra (et al. 1996); Kroeber (1925), Levy (1978), Milliken (1983), and Shoup and Milliken (1994).

The project area lies within the region occupied at the time of historic contact by the Ohlone or Costanoan group of Native Americans (Kroeber 1925) (Figure 5). Although the term Costanoan is derived from the Spanish word *Costaños*, or coast people, its application as a means of identifying this population is based in linguistics. The Costanoans spoke a language now considered one of the major subdivisions of the Miwok-Costanoan, which belonged to the Utian family within the Penutian language stock (Shipley 1978: 82-84). Costanoan actually designates a family of eight languages. Of these, Chochenyo or East Bay Costanoan was the language spoken by the estimated 2,000 people who occupied the "... east shore of San Francisco Bay between Richmond and Mission San Jose, and probably also in the Livermore Valley (Levy 1978:485).

The other seven languages of the Costanoan family were spoken by tribal groups occupying the area from the Pacific Coast to the Diablo Range, and from San Francisco to Point Sur. Modern descendants of the Costanoan prefer to be known as Ohlone. The name Ohlone is derived from the Oljon group which occupied the San Gregorio watershed in San Mateo County (Bocek 1986: 8). The two terms (Costanoan and Ohlone) are used interchangeably in much of the ethnographic literature.

On the basis of linguistic evidence, it has been suggested that the ancestors of the Ohlone arrived in the San Francisco Bay area about 500 A.D., having moved south and west from the Sacramento-San Joaquin Delta region. The ancestral Ohlone displaced speakers of a Hokan language and were probably the producers of the artifact assemblages that constitute the Augustine Pattern described above (Levy 1978:486).

Although linguistically linked as a family, the eight Costanoan languages actually comprised a continuum in which neighboring groups could probably understand each other. However, beyond neighborhood boundaries, each group's language was unrecognizable to the other. Each of the eight language groups was subdivided into smaller village complexes or tribal groups. The groups were independent political entities, each occupying specific territories



Source: Margolin 1978:2

Ethnographic Groups in the San Francisco Bay Area

Figure 5

Vineyard Avenue Corridor
Pleasanton, CA

defined by physiographic features. Access to the natural resources of the territories was controlled by each group. Although each group had one or more permanent villages, their territory contained numerous smaller camp sites used as needed during a seasonal round of resource exploitation.

Leadership was provided by a chief, who inherited the position patrilineally and who could be either a man or woman. The chief and a council of elders served mainly as community advisers. Specific responsibility for feeding visitors, providing for the impoverished, and directing ceremonies, hunting, fishing, and gathering activities fell to the chief. Only in times of warfare was the chief's role as absolute leader recognized by group members (Levy 1978:487).

Extended families lived in domed structures thatched with tule, grass, wild alfalfa, or ferns (Levy 1978). Semi-subterranean sweat houses were built into pits excavated in stream banks and covered with a structure against the bank. The tule raft, propelled by double-bladed paddles similar to those that were used in the Santa Barbara Island region, were used to navigate across San Francisco Bay (Kroeber 1925).

Mussels were an important staple in the Ohlone diet as were acorns of the coast live oak, valley oak, tanbark oak and California black oak. Seeds and berries, roots and grasses, as well as the meat of deer, elk, grizzly, rabbit, and squirrel formed the Ohlone diet. Careful management of the land through controlled burning served to insure a plentiful and reliable source of all these foods (Kroeber 1925; Levy 1978).

The Chochenyo usually cremated a corpse immediately upon death but, if there were no relatives to gather wood for the funeral pyre, interment occurred. Mortuary goods comprised most of the personal belongings of the deceased (Levy 1978:490).

The arrival of the Spanish in the San Francisco Bay Area in 1775 led to a rapid and major reduction in native California populations. Diseases, declining birth rates, and the effects of the mission system served to largely eradicate the aboriginal lifeways (which are currently experiencing a resurgence among Ohlone descendants). Brought into the missions, the surviving Ohlone, along with former neighboring groups of Esselen, Yokuts, and Miwok were transformed from hunters and gatherers into agricultural laborers (Levy 1978; Shoup and Milliken with Brown 1994). With abandonment of the mission system and the Mexican takeover in the 1840s, numerous ranchos were established. Generally, the few Indians who remained were then forced, by necessity, to work on the ranchos.

Historic Background

The historic background of the site is divided into two periods: (1) the Spanish and Mexican Periods (1769-1848) and (2) the American Period (1848-Present).

The Spanish & Mexican Periods: 1769-1848. Numerous Spanish exploratory expeditions passed through the Pleasanton area during the Spanish era. These included expeditions led by Fages, Portola, Fages and Crespi, Anza, Rivera, and Moraga (Levy 1978:486). Initial historic exploration of the San Ramon, Amador and Livermore Valleys occurred between 1769 and 1810.

Following the era of exploration, four Spanish institutions were employed to settle Alta California: missions, presidios, pueblos, and ranchos. Of these, the missions were the most successful. The favorable descriptions of the study area by early explorers Portola and De Anza led to the establishment of Mission Santa Clara and Pueblo de San Jose de Guadalupe in 1777. Mission San Jose, established in 1797, would have had the greatest impact on the local Ohlone population within the study area (Hoover 1990:6). Historic records indicate that between 1802 and 1822, 4,573 baptisms and 1,376 marriages took place at Mission San Jose. During this same time span, 2,933 Ohlone died at the Mission and by 1822 there were only 1,620 surviving Ohlone (Baker 1914:449).

After Mexico seceded from Spain in 1822, grants of land to private citizens began. Following the secularization of the missions in 1833, the number of land grants increased substantially. The Livermore Valley was divided into three ranchos; on the eastern side of the Valley was Rancho de las Positas, owned by Robert Livermore; Rancho Santa Rita owned by Juan Bernal; and Rancho Valle de San Jose, which was centered in Pleasanton and owned by Augustine Bernal (Banks 1978:6).

During the Mexican Period (1822 to 1846) the project area was located in the northern section of Rancho Valle de San Jose (Beck and Hasse 1974:30). Within this huge rancho (51,000+ acres) were several adobe structures. Three are in Pleasanton near the project area: the Juan Bernal adobe and two Kottinger family adobes (Anastasio 1986:3). John W. Kottinger, one of the earliest Pleasanton settlers, married the daughter of Juan Bernal in 1850 and became the town's first store keeper sometime after 1852. Part of Kottinger's old adobe barn still stands on Ray Street just to the west of the project area (Hoover 1990:15).

The American Period: 1848 - Present. In 1848, California became a United States territory as a result of the Treaty of Guadalupe Hidalgo which ended war with Mexico. California was not formally admitted to the Union until 1850. The Gold Rush of 1849 brought a massive influx of immigrants to California from all parts of the world. California's 1848 population of less than 14,000 (exclusive of Indians) increased to 224,000 in four years.

After California was admitted as a state, Contra Costa County, one of the original 27 counties created by the California legislature, included what is today Contra Costa and Alameda Counties. In 1853, Alameda County was created from the western and southern sections of Contra Costa County. The precursor to Pleasanton was a small settlement named Alisal, founded in 1857 when Duerr & Nusbaumer opened a store in John Kottinger's house. Kottinger, who had immigrated from Austria in 1851, married into the Bernal family and operated a livestock ranch on a portion of the Bernal rancho (Wood 1883:478). By the mid-nineteenth century the majority of Rancho lands were subdivided as a result of population growth in the Livermore-Alameda Valley. By the 1870s, Rancho Valle de San Jose had been reduced in size to 500 acres (Thompson and West 1878:119).

By 1864, the town of Alisal had a hotel and a school, in addition to the general store operated in Kottinger's house (Hinkel and McCann 1937:195). The town of Pleasanton was named in 1867 for General Alfred Pleasonton [sic]; the misspelling was apparently a clerical error when the post office was established on June 4, 1867 (Bard et al. 1992:26). The center of town moved south to the train station when the railroad arrived in 1869 and by 1876 Pleasanton had several hotels, some good stores, a post office, an express office, and numerous grain warehouses (Halley 1876:502). By the late 1870s, Pleasanton's population had grown to between 500 and 600 (Thompson & West 1878:25).

The rural areas surrounding the town of Pleasanton were particularly well adapted for livestock, and during the American Period a major industry in the project area was horse breeding (Fredrickson et al. 1978:33). Sheep, cattle, and angora goats were raised in the area, and other industries included timber harvesting from the mountainous regions, coal mining on Cedar Mountain and sandstone quarrying in the Altamont area (Wood 1883:479).

Pleasanton was incorporated in 1894. It remained a small farming community until after World War II when the opening of Parks Air Force Base and the Lawrence Livermore Atomic Research Laboratory launched a period of growth that transformed the small community into a suburban residential/office community (Anonymous 1954:4). New residential subdivisions were built in the Pleasanton area starting in the 1950s as highway improvements made commuting easier to

Oakland and the East Bay. During the 1970s and 1980s, Pleasanton became one of the fastest growing areas in the Bay Area as numerous new subdivisions, two large business parks, and a regional shopping center were built in the area. Pleasanton, now a major suburban office/residential community at the southern end of the I-680 Corridor, has a population of over 62,000.

KNOWN CULTURAL RESOURCES AND PREVIOUS CULTURAL RESOURCE SURVEYS

A record search was conducted on July 30, 1998 by the staff at the Northwest Information Center, Rohnert Park, California. All known archaeological sites and previous cultural resource surveys within one-quarter mile of the Vineyard Avenue Corridor project boundary were researched. The National Register of Historic Places, the California Inventory of Historic Resources, and California Historical Landmarks Register were examined to determine if any county, state, or federal historic landmarks or National Register of Historic Places properties were located in the project area. No cultural resource sites have been recorded within the boundaries of the project area.

Previous Surveys

There was no record of cultural resource surveys having been conducted within the project boundary. Two cultural resource surveys have been conducted within one-quarter mile of the project area, Busby (1995) and Chavez (1987) (Figure 6). No archaeological sites were recorded in either survey.

In addition to the sources mentioned above, information was gathered from the 1906 U.S. Geological Survey topographic map of the area, an 1864 General Land Office plat map, and from the 1878 Historical Atlas Map of Alameda County. These resources provided limited historic information on the location of possible structures, foundation remains or other historic resources within the project area.

Field Survey and Methodology

The archaeological field survey of the Vineyard Avenue Corridor project area was conducted on July 28-30, 1998 by William Self Associates staff archaeologists James M. Allan and Jason Reimers, and August 4 and 6, 1998 by Carrie D. Wills and Jason Reimers.

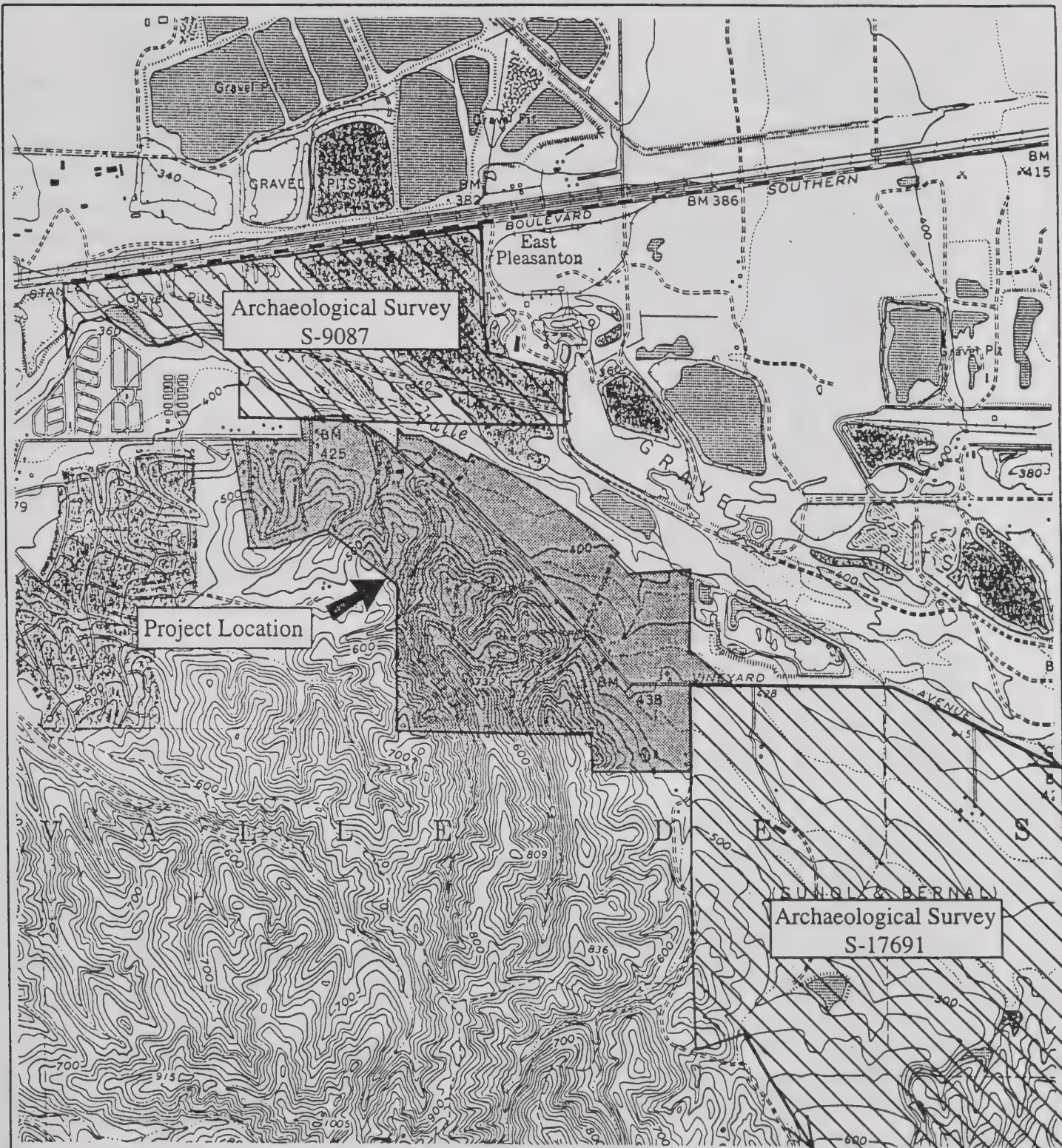


Figure 6

Project Location Map

Vineyard Avenue Corridor
Pleasanton, CA

The strategy for the field survey was to conduct an intensive survey of the entire project area for which access was acquired. Steep slopes (over 45 degrees) were excluded as it was surmised that cultural resource deposits, either historic or prehistoric, were unlikely in these areas. They were, however, examined visually for the presence of historic debris or rock outcroppings that might have served as shelters or could contain petroglyphs or incipient mortars. Also excluded from the survey were parcels that have been fully developed, parcels that are known to have been graded, a parcel formerly used as a land-fill dump site, and five parcels for which access was not acquired. Of the 33 parcels, 11 were excluded from the field survey. See Table 1 for a summary of the field survey.

The survey utilized a transect interval spacing of approximately 30 meters (100 feet) or less, walked in a zig-zag pattern. Ground visibility on all but one parcel (number 21) was very poor due to the density and height of the grasses and star thistle (see attached photographs).

Survey Results

No archaeological sites, features or objects were observed during the survey. Four structures estimated to be over 45 years old were recorded on two parcels within the project area. The first, designated WSA-1, consists of a free-standing barn and a storage shed in the otherwise undeveloped 29.84 acre parcel numbered 21. WSA-2 is a free-standing barn and a structure that appears to be a storage shed on the otherwise fully-developed 5.5 acre parcel numbered 31. The structures comprising WSA-1 and 2 appear to retain their original wood siding, although roofing materials may not be original in all cases.

The structures at WSA-1 both appear to retain some integrity of materials and workmanship and are in their original location. A residential structure stands adjacent to the barn at WSA-2. The residence appears to date after 1950, but the barn and storage shed appear to be of an earlier construction, both retain integrity of materials and workmanship and are in their original locations. The setting has been altered through the introduction of more recent structures, such as horse corrals and training rings.

California Department of Parks and Recreation Primary Record forms and photographs of the structures comprising resources WSA-1 and WSA-2 were prepared for submittal to the California Historical Resources Information System. They may be found in the attached appendix.



Typical Terrain and Groundcover in Survey Area

Vineyard Avenue Corridor
Pleasanton, CA

Table 1: Summary of Parcels Surveyed

Lot No.	Acres	Owner	Address	Surveyed	Notes
1	5.00	Hatsushi	2756 Vineyard Ave.	N	Active plant nursery facility
2	5.02	Hatsushi	2770 Vineyard Ave.	Y	
3	5.02	Hatsushi	2798 Vineyard Ave.	N	Graded parcel
4	7.24	Nevis	2546 Vineyard Ave.	Y	
5	2.66	Halverson	751 Clara Ln.	N	Developed - no natural ground surface evident
6	2.45	Elgammal	865 Clara Ln.	Y	
7	2.49	Halverson	837 Clara Ln.	N	Developed - no natural ground surface evident
8	0.82	Allec	2538 Vineyard Ave.	N	Developed - no natural ground surface evident
9	2.40	Hubbard	2756 Vineyard Ave.	N	Graded parcel
10	2.64	Lutz Homes	Vineyard Ave.	Y	
11	2.37	Oetman	Vineyard Ave.	Y	
12	7.37	McGuire	Vineyard Ave.	Y	
13	1.90	Molinaro	Vineyard Ave.	Y	Partially graded parcel
14	20.62	Garbage Serv.	Vineyard Ave.	N	Landfill - no natural ground surface evident
15	2.65	Pietronave	2500 Vineyard Ave.	N	No access
16	2.43	Dominisse	Vineyard Ave.	N	Landfill - no natural ground surface evident
17	2.41	Homer	Vineyard Ave.	N	No access
18	35.38	Hahner	2287 Vineyard Ave.	N	No access
19	33.30	Lin	1689 Vineyard Ave.	Y	
20	0.87	Safreno	1627 Vineyard Ave.	N	Graded parcel
21	29.84	Lonestar	1465 Vineyard Ave.	Y	Recorded two structures
22	50.13	Berlogar	2200 Vineyard Ave.	Y	Surveyed drainage; very steep terrain
23	20.00	Chrisman	1944 Vineyard Ave.	Y	
24	20.00	Brozosky	1700 Vineyard Ave.	Y	Surveyed drainage; very steep terrain
25	20.19	Konig	1680 Vineyard Ave.	Y	Parcel too steep, surveyed level area at summit
26	20.51	Roberts	1666 Vineyard Ave.	Y	Surveyed drainage; very steep terrain
27	20.00	Goodwin	1630 Vineyard Ave.	Y	

Lot No.	Acres	Owner	Address	Surveyed	Notes
28	21.30	Heinz	Vineyard Ave.	N	No access
29	7.70	Madden	Vineyard Ave.	N	No access
30	7.11	Thibault	Vineyard Ave.	Y	
31	5.50	Fagliano	1364 Vineyard Ave.	Y	Developed. Recorded barn & storage shed only
32	0.30	Simoni	Unknown	N	Graded parcel
33	7.6	Lonestar	Unknown	Y	

As mentioned, ground visibility was very poor on all parcels except for number 21. On that parcel, the ground cover was comparatively sparse in certain areas, providing fair to good visibility of the ground surface. Numerous concentrations of native lithic material (chert, quartzite, sandstone, etc.) were observed scattered around the parcel. None of the material appeared to have been culturally modified, but the leaseholder informed WSA personnel that several "arrowheads" had been recovered from the property in the past and that a groundstone mortar had been recovered on the adjacent parcel to the east (outside the project area).

No additional historic sites or prehistoric sites, objects or features were observed within the survey area.

IMPACT ASSESSMENT AND RECOMMENDATIONS

Significance Criteria

Appendix K of the CEQA Guidelines states that a project will be considered to have a significant effect on cultural resources if it will "disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group . . .". In addition, CEQA contains provisions relative to preservation of historic and prehistoric cultural sites. Appendix K of CEQA directs public agencies to avoid damaging effects on an archaeological resource whenever feasible. If avoidance is not feasible, the

importance of the site shall be evaluated " . . . as a means of determining impact and developing mitigation measures."

CEQA Appendix K, Section III, states that an important archaeological resource is one which:

- A. Is associated with an event or person of:
 - 1. Recognized importance in California or American history, or
 - 2. Recognized scientific importance in prehistory;
- B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;
- C. Has special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- D. Is at least 100 years old and possesses substantial stratigraphic integrity; or
- E. Involves important research questions that historical research has shown can be answered only with archaeological methods.

In addition, the significance of historic and prehistoric cultural resources is judged in accordance with the criteria for eligibility for nomination to the California Register of Historical Resources (as contained within the criteria for eligibility to the National Register of Historic Places as defined in 36 CFR 60.4). If resources are determined to be significant, and therefore eligible for California Register listing, they are afforded some degree of regulatory protection. Those resources determined not significant, that is, ineligible for Register listing, are subject to recording and documentation only, and are afforded no further protection under state or federal law. Occasionally certain resources, although they may not be assessed as 'significant', may nonetheless be of local or regional importance such that mitigation may be warranted or may result from public comment regardless of their assessed significance.

The National Register criteria state that 'eligible historic properties' are:

...districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that (a) are associated with events that have made a significant contribution to the broad patterns of our history,; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or (d) that have yielded or may be likely to yield, information important to history or prehistory.

To evaluate cultural resource sites against such broad criteria requires consideration, among other things, of the overall integrity of the site, the regional culture history (the types, ages and distribution of other sites in the region), and the nature of questions that researchers are attempting to address regarding the history or prehistory of the region.

Cultural site evaluation assesses the potential of each site to meet one or more of the criteria for "importance" based upon visual surface and subsurface evidence (if available) at each site location, information gathered during the literature and record searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site.

Impacts

Impacts on the Historic Structures. Potential impacts of the project on cultural resources would result from the possible effects of development that would be permitted by the Specific Plan on the identified historic structures or on other cultural resources that have not yet been identified. In order for potential impacts to be considered significant, the historic properties within the Specific Plan area would have to be considered eligible for listing on the California Register of Historic Resources. Although many of the structures appear to retain integrity of design, materials and workmanship, the setting has been altered in most cases through the introduction of more recent buildings. Additionally, none of the properties appear to be associated with events or persons important in local or regional history, nor do they embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master. They are fairly typical vernacular barn and agricultural structures lacking in distinguishing or significant architectural characteristics. It is recommended they do not meet the criteria for eligibility to the National or California Register. No further mitigation, therefore, is required on these properties.

Impacts on Unidentified Cultural Resources. Even though the field survey conducted for this study did not reveal any prehistoric cultural sites, features, or objects in the project area, it is possible that such sites may be present but obscured by vegetation or non-cultural soil. Ground disturbance associated with construction may threaten cultural resources that have gone unnoticed during the surface survey of the area, or that may occur on parcels for which survey was not possible due to lack of access. Failure to account for potential impacts to important cultural resources would be considered a significant impact. To mitigate this potential impact, any discoveries made during construction must be evaluated by a qualified archaeologist, who may propose mitigation measures if warranted. These procedures will reduce potential impacts on previously-unidentified cultural resources to a less-than-significant level.

Impacts on Buried Native American Human Remains. It is possible that buried prehistoric human remains could be discovered during construction, as they are known to occur in the Pleasanton area. This possibility is addressed by Section 7050.5(b) of the California Health and Safety Code, which states:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

The County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the Native American Heritage Commission within 24 hours. The Commission has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant. Sections 5097.98 and 5097.99 of the Public Resources Code also call for ". . . protection of Native American human burials and skeletal remains from vandalism and inadvertent destruction." To achieve this goal, it is recommended that the construction personnel on the project be instructed as to the potential for discovery of human remains, and both the need for proper and timely reporting of such finds, and the consequences of failure thereof. Enforcement of this existing statute would protect against significant adverse impacts on buried human or potentially human remains.

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Horner (first name not given)

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APPENDIX

D.P.R. PRIMARY RECORDS

WSA-1

PRIMARY RECORD

Primary # _____

HRI # _____

Trinomial _____

NRHP Status Code _____

Other Listings _____

Review code _____

Reviewer _____

Date _____

Page 1 of 4*Resource Name or #: (Assigned by recorder) WSA-1

P1. Other Identifier: _____

*P2. Location: ☐ Not for Publication ☐ Unrestricted*a. County Alameda

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Livermore, CA Date 1961/1980 Rev. T 3S; R 1E; 1/4 of 1/4 of Sec Unsectioned; MD B.M.c. Address 1465 Vineyard Ave. City Pleasanton, CA Zip 94566d. UTM: (Give more than one for large and/or linear resources) Zone 10, 603760 mE/ 4168105 mN

e. Other Locational Data (e.g., parcel #, legal description, directions to resource, elevation, etc., as appropriate): From I-680 take the Bernal Ave. exit and travel east for approximately 3 1/2 miles. Turn right onto Vineyard Ave and continue east/southeast for approximately 2 1/4 miles.- Gated fence on left marks entrance into WSA-1.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Site consists of a barn and a storage shed currently occupied by four very friendly horses. Neither of the structures were constructed with square nails but there are remnants of electrical insulators which were utilized with early (~1881-1930), two-strand "knob and tube" electrical wiring (Burke 1982:65). The barn measures approximately 30' w x 36' l x 22' h, is constructed with horizontal wood lap siding and has a gable roof. The roof was originally constructed with wood shingles which are now covered with corrugated steel roofing sheets. The east elevation has a 12' wide x 15' high opening with no door and a single, wood frame, opening with a hinged door ostensibly for allowing the conveyance of bales of hay. The south elevation has two wood-shuttered window or hay bale openings with a large lemon tree growing between them. See Continuation Sheet.

*P3b. Resource Attributes: (List attributes and codes) HP4

P5. Photo or Drawing (Photo required for buildings, structures, and objects.)

SEE CONTINUATION SHEETS

*P4. Resources Present:

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District
☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo (view, date, accession #) _____

*P6. Date Constructed/Age and Sources:

☒ Historic ☐ Prehistoric ☐ Both*P7. Owner and Address: LonestarAggregates

*P8. Recorded by (Name, affiliation, and address): C.D. Wills & J. Reimers;
William Self Associates, P.O. Box 2192, Orinda, CA
94563

*P9. Date Recorded: 8/4/98

*P10. Survey Type: (Describe)

Reconnaissance

P11. Report Citation (Cite survey report and other sources, or enter "none."): None

*Attachments: ☐ NONE

☒ Location Map ☐ Sketch Map ☒ Continuation
 Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record
☐ Linear Resource Record ☐ Milling Station Record
☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other
 (List): _____

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Page 2 of 4

*Recorded by: Carrie D. Wills & Jason Reimers *Date 8-7-98 Continuation ☒ Update

Primary # _____

HRI# _____

Trinomial _____

*Resource Name or # (Assigned by recorder) WSA-1

***P3a. Description Cont.:**

The west elevation has a small (~20' l x 12 w x 8' h) lean-to with corrugated metal sheets serving as a roof; there are no door or window openings. The south elevation has two wood-shuttered window or hay bale openings with a large lemon tree growing between them. The north elevation has two wood frame, window/hay openings, and two small, wood frame windows (one has a steel grate covering). A portion (~10' w x 7' h) of the north elevation wall has been covered with wood shingles and has a small shelf serving an unknown function.

The storage shed measures approximately 20' w x 30' l x 10' h, is constructed with horizontal wood lap siding and has a gable, corrugated steel roof. The east and west elevations have double hinged, vertical lap siding, garage-style doors. The north elevation has two small feed stations and what appears to be a coop loosely attached to the exterior wall.

A few boards, covered with corrugated metal sheets, extending from the roof line of the shed to the north wall of the barn serve as shade/shelter for the horses.

Burke, Ken (Editor)

1982 *Basic Wiring Techniques*. T. Jeff Williams, writer. Chevron Chemical Company, Ortho Books, S.F.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 3 of 4

*Resource Name or # (Assigned by recorder) WSA-1

*Recorded by: Carrie D. Wills & Jason Reimers *Date 8-7-98 Continuation ☒ Update

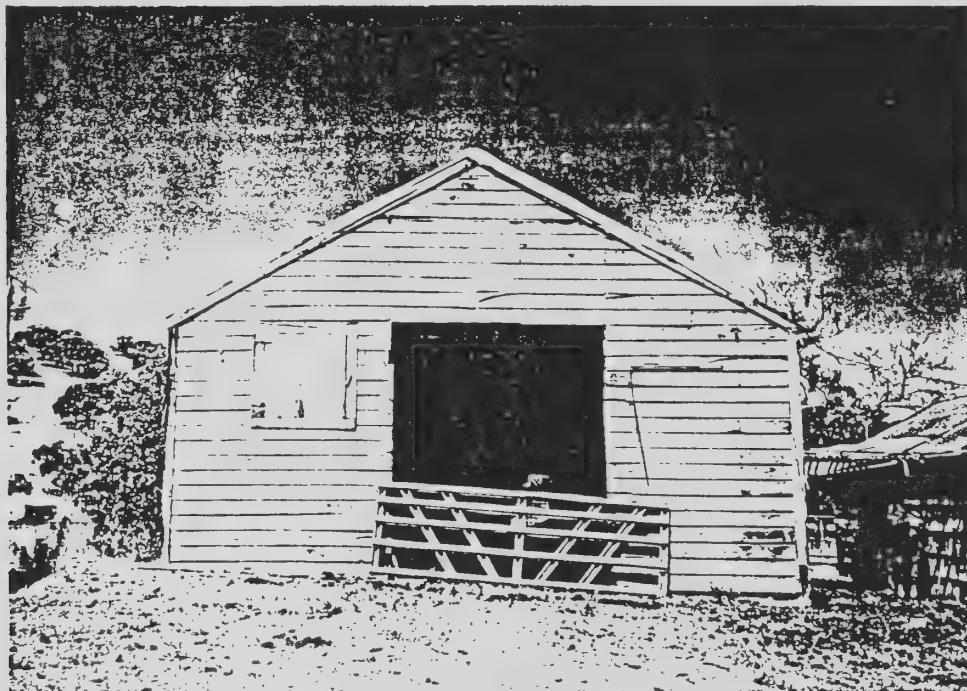
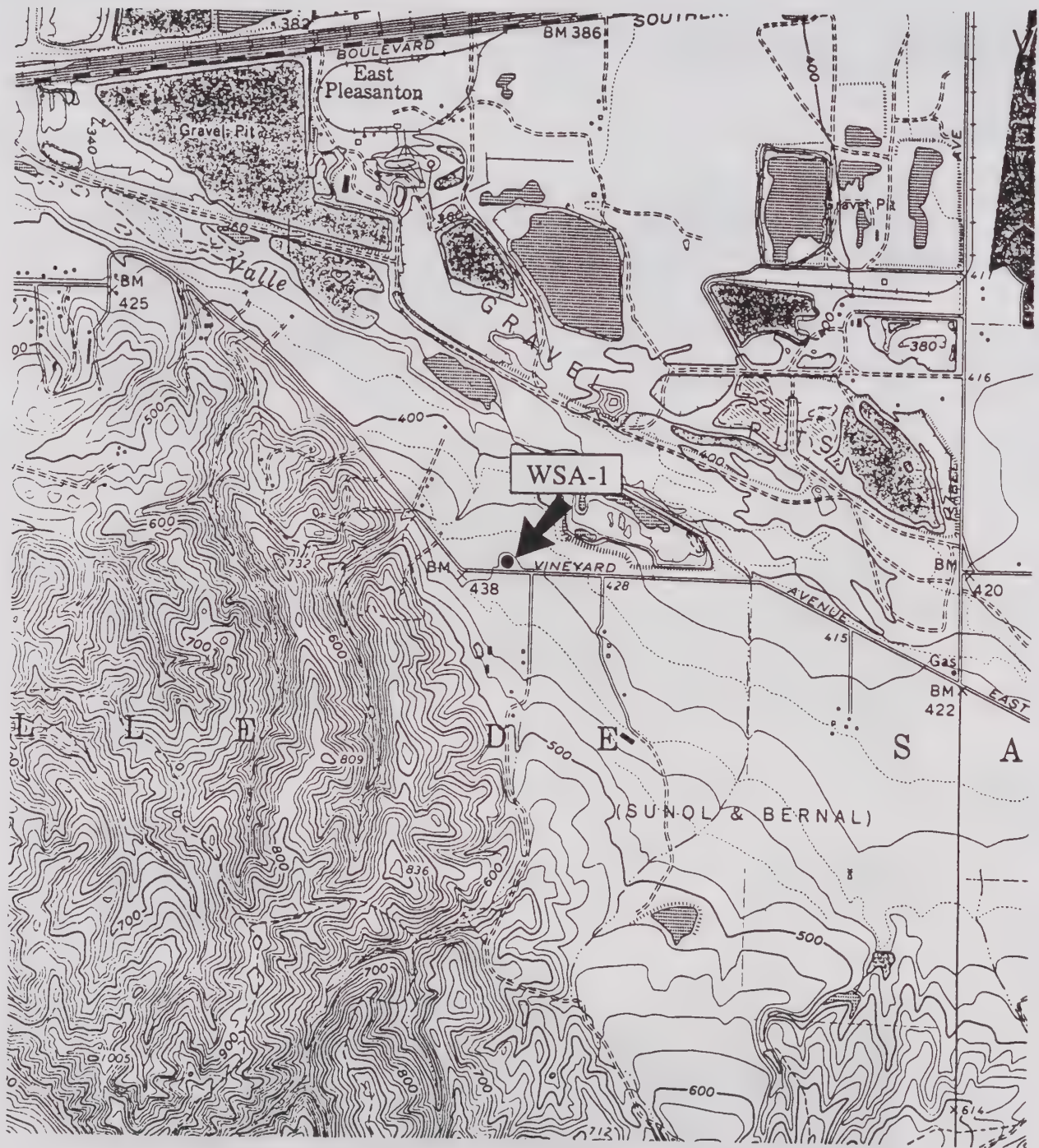


Photo 1 WSA-1 Barn, east elevation. Facing west.



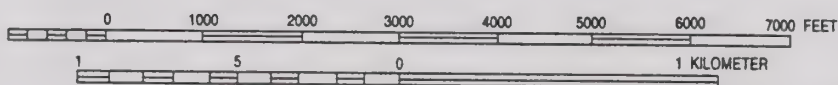
Photo 2 WSA-1 Storage Shed, east elevation. Facing west.



LIVERMORE, CALIF.

1961

PHOTOREVISED 1980



CONTOUR INTERVAL 20 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

Figure

WSA-1

Vineyard Avenue Corridor
Pleasanton, CA

WSA-2

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION PRIMARY RECORD	Primary # _____ HRI # _____ Trinomial _____ NRHP Status Code _____ Other Listings _____ Review code _____ Reviewer _____ Date _____
---	--

Page 1 of 4 *Resource Name or #: (Assigned by recorder) WSA-2

P1. Other Identifier: _____

*P2. Location: ☐ Not for Publication ☐ Unrestricted *a. County Alameda

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Livermore, CA Date 1961/1980 Rev. T 3S; R 1E; 1/4 of 1/4 of Sec Unsectioned; MD B.M.

c. Address 1364 Vineyard Ave. City Pleasanton, CA Zip 94566

d. UTM: (Give more than one for large and/or linear resources) Zone 10, 603835 mE/ 4167780 mN

e. Other Locational Data (e.g., parcel #, legal description, directions to resource, elevation, etc., as appropriate): From I-680 take the Bernal Ave. exit and travel east for approximately 3 1/2 miles. Turn right onto Vineyard Ave and continue east/southeast for approximately 2.4 miles. Turn right on Vineyard Lane and drive approximately 1000 feet; WSA-2 is on the right.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Site consists of a barn and a storage shed. Neither of the structures were constructed with square nails. The barn measures approximately 30' w x 36' l x 20' h, is constructed with vertical and horizontal wood lap siding and board and batten. It has a gable roof and was originally constructed with wood shingles which are now covered with corrugated steel roofing sheets. The east elevation has two single-hinge entrance doors and one double-hinge garage door. See Continuation Sheet.

*P3b. Resource Attributes: (List attributes and codes) HP4

*P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5. Photo or Drawing (Photo required for buildings, structures, and objects.)

SEE CONTINUATION SHEETS

P5b. Description of Photo (view, date, accession #) _____

*P6. Date Constructed/Age

and Sources: ☒ Historic

☐ Prehistoric ☐ Both

*P7. Owner and Address: P.J. Fagliano

*P8. Recorded by (Name, affiliation, and address): C.D. Wills & J. Reimers: William Self Associates, P.O. Box 2192, Orinda, CA 94563

*P9. Date Recorded: 8/4/98

*P10. Survey Type: (Describe) Reconnaissance

P11. Report Citation (Cite survey report and other sources, or enter "none."): None

*Attachments: ☐ NONE

☒ Location Map ☐ Sketch Map

☒ Continuation Sheet ☐ Building, Structure, and Object Record

☐ Archaeological Record ☐ District

Record ☐ Linear Resource Record

☐ Milling Station Record ☐ Rock Art

Record ☐ Artifact Record

☐ Photograph Record ☐ Other (List): _____

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____

HRI# _____

Trinomial _____

Page 2 of 4

*Resource Name or # (Assigned by recorder) WSA-2

*Recorded by: Carrie D. Wills & Jason Reimers *Date 8-7-98 Continuation ☒ Update

***P3a. Description Cont.:**

The west elevation has one sliding barn door, one hay opening and one barn-door-sized opening with no door. The north and south elevations were blocked from view by other buildings.

The storage shed measures approximately 20' w x 28' l x 10' h with a corrugated metal, gable roof. The north elevation is constructed with horizontal wood lap siding with a vertical wood, single-hinge door and a painted corrugated metal garage door. The east elevation is constructed with vertical sheets of painted corrugated metal; there are no windows or doors on the east elevation. Could not access the west and south elevations due to a dog.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 3 of 4

*Resource Name or # (Assigned by recorder) WSA-2

*Recorded by: Carrie D. Wills & Jason Reimers *Date 8-7-98 Continuation ☒ Update



Photo 1 WSA-2 Barn, east elevation. Facing west.



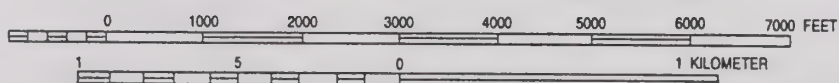
Photo 2 WSA-2 Storage Shed, north and east elevation. Facing south.



LIVERMORE, CALIF.

1961

PHOTOREVISED 1980



CONTOUR INTERVAL 20 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

Figure

WSA-2

Vineyard Avenue Corridor
Pleasanton, CA

Prepared by William Self Associates

appendix D

Evaluation of Potential Salt Loading Impacts

APPENDIX D

Evaluation of Potential Salt Loading Impacts Vineyard Corridor Specific Plan

• Potential Increase in Salt Loading from Proposed Project:

Land Use	Total Area (Acres)	New Irrigation (AF/Y/acre)	Total New Irrigation (AF/Y)	Average TDS of Water (mg/L)	Salt Load (tons/yr)
Residential	118.0	0.4	45.4 ²	201.0 ⁵	12.4
Open Space	154.0	0.0	0.0	0.0	0.0
Park	20.0	2.9	57.0 ³	201.0 ⁵	15.6
Streets	12.0	0.0	0.0	0.0	0.0
Vineyard	67.0	2.0 ¹	134.0	420.0 ⁶	76.4
School	12.0	1.6	19.0 ⁴	201.0 ⁵	5.2
Total			255.4		109.6

• Potential Reduction in Salt Loading from Proposed Project:

- Number of homes to be converted to sanitary sewer: 19
- Existing discharge to septic system (AF/Y): 8.5 ⁷
- TDS (mg/L): 850.0 ⁸
- Salt load (tons/yr): 9.8

• Net Increase in Salt Loading and Discharge from Proposed Project:

- Net salt load increase to creeks (tons/year): 99.8
- Net discharge increase to creeks (AF/Y):⁹ 42.6

• Existing Alameda Creek Annual Discharge, Average TDS, and Salt Loading

- Annual discharge from 1970-1994 (AF/Y):¹⁰ 84,820
- Average TDS (mg/L)¹¹ 454
- Total salt load (tons/yr) ¹² 52,306

• TDS Increase in Alameda Creek at Niles due to Proposed Project¹³

- Modified annual discharge in Alameda Creek (AF/Y): 84,862.6 [Alameda Creek + proposed project]_{discharge}
- Salt load in Alameda Creek w/ proposed project (tons/yr): 52,406.0 [Alameda Creek + proposed project]_{salt load}
- TDS in Alameda Creek with proposed project (mg/L): 454.6 [Alameda Creek + proposed project]_{salt load}
- Net TDS increase in Alameda Creek due to proposed project (mg/L): 0.6
- Percent increase in TDS in Alameda Creek (%): 0.1

• Footnotes

¹ Petrucci, V.E., and Dellavalle, N., 1997, *Pleasanton Vineyard Avenue Corridor Specific Plan Economic Analysis*, J

² Total residential water demand of 131 AF/Y is estimated in the Vineyard Specific Plan EIR.

It is estimated that 35 percent of residential water is used for outdoor irrigation.

³ Total park water demand of 60 AF/Y is estimated in the Vineyard Specific Plan EIR.

It is estimated that 95 percent of park water is used for outdoor irrigation

⁴ Total school water demand of 21 AF/Y is estimated in the Vineyard Specific Plan EIR.

It is estimated that 90 percent of school water is used for outdoor irrigation.

⁵ City of Pleasanton Water Department, 1998, *Written Communication from Susan Clough to Bruce Abelli-Amen*, 5 November.

⁶ Petrucci and Dellavalle, 1997, op. cit.

⁷ Existing residential water uses estimated at 13 AF/Y in Vineyard Specific Plan DEIR; it is estimated that 65% of residential water use enters the septic system.

⁸ Metcalf & Eddy, Inc., 1972, *Wastewater Engineering*, McGraw-Hill Book Company, page 231.

⁹ Assumes 80 percent evapotranspiration of applied irrigation.

¹⁰ U.S. Geological Survey, 1995, *Water Resources Data, California, Water Year 1994, Volume 2*.

¹¹ DSRSD-EBMUD Recycled Water Authority (DERWA), 1996, *DEIR for the San Ramon Valley Recycled Water Program*, August

¹² Based on TDS and annual discharge in Alameda Creek.

¹³ Assumes all salts from the proposed project enters Alameda Creek.

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